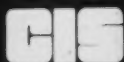


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NEW DEVELOPMENTS IN BIOTECHNOLOGY: U.S. INVESTMENT IN BIOTECHNOLOGY

Contractor Reports: Part 1

The Biotechnology Industry in the United States

December 1987

The Business Studies Program
North Carolina Biotechnology Center
Research Triangle Park, North Carolina 27709-3547

This is a contractor report that was used in preparing OTA's final Special Report. OTA makes this contractor report available for the use of readers desiring a more detailed or technical discussion of an issue than can normally be accommodated in our final report. As an OTA contractor report, it has not been reviewed or approved by the Technology Assessment Board. The findings and conclusions expressed are those of the author and do not necessarily reflect the views of OTA, the Advisory Panel or the Technology Assessment Board.

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**REPORT ON THE BIOTECHNOLOGY INDUSTRY IN THE
UNITED STATES**

**PREPARED FOR THE U.S. CONGRESSIONAL
OFFICE OF TECHNOLOGY ASSESSMENT**

**BY
THE BUSINESS STUDIES PROGRAM
NORTH CAROLINA BIOTECHNOLOGY CENTER**

P. O. Box 13547

Research Triangle Park, North Carolina 27709-3547

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**FINAL DRAFT
MAY 1, 1987**

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Report on the Biotechnology Industry In The United States

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I. INTRODUCTION:

This report was prepared in an effort to compile information on the biotechnology industry in the United States. Towards this end, a questionnaire study was undertaken to receive information that is not generally available from other sources. These data included revenue information, financing information, patents, products, personnel breakdowns, etc.

Companies formed to work with the new biotechnologies of genetic engineering, monoclonal antibodies, and cell culture were chosen as the subject of the study. It should be pointed out that they represent only a fraction of industry involvement in biotechnology. Other involvement comes from the ancillary industry (consulting, equipment, supplies, reagents, production, etc.). In addition, large industry has incorporated biotechnology. Although not the primary focus of this report, some basic data about major corporations in the U.S. with involvement in biotechnology is also included

In addition to the questionnaire-evolved data (from a return rate of over 46%), other data were derived from the literature—compilations of biotechnology industry information, public journals, and company literature. We did note that, in many cases, the literature was not accurate when compared with information derived directly from the questionnaires, which were mostly answered by top management in the companies. Thus, for company basic information, such as year of founding and product line, we were able to use data from the literature. For more sensitive data, the majority of this report, we used the questionnaire returns to give a representation of the industry. We thus have presented listings of data both from the entire database and from the questionnaire responses. In many cases, important data were compiled and presented also in table and graphic form.

In most cases, we broke down the data by classification of involvement and sorted the listings by these classes, so the reader can view the data by individual areas such as animal agriculture or diagnostics. Some areas, with few responding companies, had a minimum of data. We also broke down some information areas to those with both primary and secondary interests of the companies, and those data are listed individually for each classification code.

II. Methods

A. General

Our biotechnology business information program contains a three-faceted approach to biotechnology business data. This can be summarized as follows:

3-Way Attack:

- Biotechnology Databases
- Information Center and Library
- Contact with Companies/Universities

Our existing and databases are the primary tool of the program to get rapid, organized, and useful information relating to the industry. They are:

The Databases:

1. Companies—Company Information
2. Actions—What Companies Do
3. Titles—Current Access to the Literature
4. NC Biotechnology—For Future Directories and Information Transfer

The Companies database was the primary source of information for this report. Previous to this work, the database contained basic information on biotechnology companies and related companies on a worldwide basis. The information gathering for this study created a new database, with more in-depth information on fewer, but biotechnology-specific U.S. companies.

B. The Questionnaire Study.

To get first-hand in-depth information, the following steps were taken:

1. Companies were chosen for their direct and focused involvement with utilizing the three biotechnologies; genetic engineering, monoclonal antibodies, and cell culture. The first grouping was chosen from the old Companies database. There were approximately 310 companies in the U.S. that fit the criteria. These companies were checked individually using directories of biotechnology companies to ensure that address, phone and management information was correct as well as to ensure that our classification was correct.

2. Companies were contacted by telephone. Most of the calls were made

by Duke University graduate students Jonelle Roth and Carol Lavrich. We called company presidents and other top managers and asked them to help us in four ways:

- a. To answer the NCBC/OTA questionnaire
- b. To send us printed information on the companies immediately
- c. To place us on their mailing list so our NCBC program can received continuing information.
- d. To serve as a contact, if more help was needed.

3. Of the contacted managers, all but about 4 agreed to help us, or put us in contact with someone who would help us. About 25 companies were either out of business, not really biotechnology companies, or were not reachable after 3-5 attempts. Most of these are listed in section IID. Yet others had changed their name or their status. In the end, we found 296 companies that fit the category to the best of our knowledge. We also scoured directories of biotechnology companies to make sure that we had not overlooked relevant companies.

These directories (also used as sources of information on individual companies) were:

- a. Sittig and Noyes--Directory of Biotechnology Companies, 1987
- b. Walton and Hammer--Genetic Engineering and Biotechnology Yearbook, 1985.
- c. Genetic Engineering News Directory of Biotechnology Companies, 1987
- d. Bioengineering News: Bio1000, 1986-1987 update.
- e. SCRIP Directory of Biotechnology Efforts in Pharmaceuticals, 1987.

In all, approximately 750 phone calls were placed to reach the companies. Individual respondents were logged in and the questionnaire and cover letter were sent out within 4 days. The first wave of phone calling and mailing took place from Jan. 5, 1987 to Feb. 13, 1987.

4. The questionnaire was designed to cover information for four different purposes. Some parts (approximately half) were questions related to this OTA-contracted study. Others were for academic studies the principal author is undertaking related to the past history and future projections of the biotechnology industry, with his collaborator at the Wharton School (Questionnaire Section III) and on founders of the biotechnology industry for a study with his collaborator at the Fuqua School (Section I-C). The last two sections (IV and V) were for the investigator's own studies on competition in the industry and perceptions about future growth. It was made clear in both the telephone contact and the cover letter that the questionnaire had multiple purposes and was not being sent solely as an OTA study. A copy of the questionnaire is in section IIB and the cover letter is in section IIC of this report.

5. By March 25, 1987 138 questionnaires were received, of which 132 still fit the category and were entered into the new database. Another 10-15 were returned with refusals. Of the answered questionnaires, 79 came from company

CEO's or Presidents, 25 from Vice Presidents and the remainder from other managers. Many questionnaires were missing financial, patent or other data, most likely due to the sensitive nature of the questions; approximately 90-100 were filled in each category. Thus, by that date there was a 44% response, enough to give a good analysis of the industry.

6. A call-back program was initiated in mid-March; to contact people who had not yet responded. Another 250-300 calls were placed and it was believed that this program would yield us another 30-40 questionnaires. Only 10 were received and data from 7 of these were added to the study.

7. A new database was created to handle the new, detailed information. This database was designed to allow work on this report, to meet other NCBC needs, and to work on the academic studies.

The databases reside on a Macintosh Plus computer with 1 megabyte of RAM and a 20 megabyte Dataframe hard disk drive. The database management program used is Blythe Software's Omnis 3 Plus. Some data were exported to Microsoft's Excel spreadsheet program for further analysis. This report was prepared using Microsoft Word 3.0, Cricket Graph, Microsoft Excel, and Apple's LaserWriter Plus printer.

C. Other Notes:

1. Classification of the companies' primary and secondary interests were divided into 25 possible categories. The Codes for the categories are listed in Section IIE, and are used throughout this report. An additional code sheet is placed in the section on areas of interest, Section VII.

2. Company size was divided into small (1-20 employees), medium (21-100) and large (101-1000). The S, M, and L codes appear under the heading "TYPE" or "SIZE" at various places in the report. Companies that are subsidiaries are marked with a "U", and joint ventures are marked with a "J" in the "TYPE" category.

3. In many cases, data were reorganized by primary interest code to allow the OTA to examine data broken down in this way, as per OTA request. The six most frequently requested categories (Animal Agriculture, Plant Agriculture, Reagents, Specialty Chemicals, Human Diagnostics, and Therapeutics) were more closely examined, and many parts of the data were broken down by these six company categories.

4. Companies were divided by type of financing into private, public, or subsidiary, in addition to the specific financing data gleaned from the questionnaire. These are noted as PRI, PUB, or SUB in some listings.

D. Personnel

Mark Dibner, Program Director (9/86) and director of OTA project.

- B.A., University of Pennsylvania
- Ph.D., Cornell University, in neurobiology
- M.B.A., Widener University
- Postdoctoral Studies at Univ. of Colorado and UCSD
- Worked with E.I. Du Pont for 6 years
- Currently, adjunct Assoc. Professor at Fuqua School of Business at Duke Teaching "Management of Technology" and Senior Fellow at the Wharton School
- Author "Basic Methods in Molecular Biology" (Elsevier, 1986)

Nancy Bruce, Information Specialist (12/86)

- B.A., College of Wooster
- M.A., Hartford Seminary Foundation
- M.S.L.S., Case Western Reserve Univ.
- 2 years, Brown University's Science Library
- 6 years, UNC-CH Health Science Library
- expert in computerized information searching and special libraries

Carol Lavrich, Student Assistant

- B.A., Ohio State University
- 8 years' experience in bioscience marketing
- Currently M.B.A. student at Duke

Jonelle Roth, Student Assistant

- B.A., University of Illinois
- Currently Ph.D student at Duke

North Carolina Biotechnology Center/OTA Biotechnology Company Questionnaire

Directions: Please answer all questions. Please note the desired format for the answers in each section. A few sections have been marked with asterisks (**) and these answers will be kept in strict confidence and only used for aggregate data. If you wish any other answer(s) kept in confidence, please place asterisks next to the answer. Thank you very much for your assistance!

I. General Company Information and History:

A. Company name: _____

B. Year of founding: 19 _____

C. Primary founder(s) of company and their background:

Name:	Previous Organization:	Previous Title:	Initial Title in Co.:
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

D. Classification of company: Please check one primary classification that best fits your company, and as many other categories you feel are appropriate for the secondary classification. State percent of your company's total effort that each represents:

	<u>Primary</u> (check one)	<u>Secondary</u> (check some)	<u>% Total Effort</u>
Agriculture, Animal	_____	_____	_____ %
Agriculture, Plant	_____	_____	_____ %
Biomass Conversion	_____	_____	_____ %
Biosensors/Bioelectronics	_____	_____	_____ %
Bioseparations	_____	_____	_____ %
Biotechnology Equipment	_____	_____	_____ %
Biotechnology Reagents	_____	_____	_____ %
Cell Culture, General	_____	_____	_____ %
Chemicals, Commodity	_____	_____	_____ %
Chemicals, Specialty	_____	_____	_____ %
Diagnostics	_____	_____	_____ %
Energy	_____	_____	_____ %
Food Production/Processing	_____	_____	_____ %
Mining	_____	_____	_____ %
Production/Fermentation	_____	_____	_____ %
Therapeutics	_____	_____	_____ %
Vaccines	_____	_____	_____ %
Waste Disposal/Treatment	_____	_____	_____ %
Other(describe) _____	_____	_____	_____ %
Total 100%			

E. Technology of company: Please indicate the percent of your company's total efforts that relate to the following areas:

	Percent of total efforts
Biotechnology—all categories	_____ %
—Genetic Engineering/rDNA	_____ %
—Monoclonal Antibodies	_____ %
—Cell culture	_____ %

F. Company personnel: Please indicate the approximate number of employees in the following categories as they were at the end of your first year after founding, at the present time, and what you expect five years from now.

	END 1st YEAR	NOW	IN 5 YEARS
1. TOTAL COMPANY EMPLOYEES	_____	_____	_____
2. SCIENCE/TECHNICAL STAFF (TOTAL)	_____	_____	_____
-Number with doctorate degrees	_____	_____	_____
-Number engaged in basic research	_____	_____	_____
3. MANAGEMENT STAFF	_____	_____	_____
-Number with advanced degrees	_____	_____	_____
-Number of staff in sales/marketing	_____	_____	_____
-Number of staff in production	_____	_____	_____

G. Patents and Products:

1. Number of biotechnology U.S. patents approved for your company for each year:

1981 _____ 1982 _____ 1983 _____ 1984 _____ 1985 _____ 1986 _____
 1987(expected) _____ Approximately how many patent applications are now on file?: _____ **

2. Most significant patent(s) obtained by your company(description): _____

3. Number and description of biotechnology products marketed by your company in each of the following years:

	<u>Number</u>	<u>Description</u>
1981	_____	_____
1982	_____	_____
1983	_____	_____
1984	_____	_____
1985	_____	_____
1986	_____	_____
1987*	_____	_____
1988*	_____	_____

*expected

II. Company Revenues, Financing, and R & D.

A. Financing of Company: (enter percent of total financing in each category and total amount of financing on bottom line)

	END 1st YEAR	NOW
Venture capital	_____ %	_____ %
Private investment	_____ %	_____ %
Equity Financing, US	_____ %	_____ %
Equity Financing, Foreign	_____ %	_____ %
Public stock offering	_____ %	_____ %
RDLF	_____ %	_____ %

TOTAL FINANCING (amount) \$ _____ ** \$ _____ **

B. Major corporate investors in your company (please list):

U.S. _____

Foreign: _____

C. R & D Budget for current fiscal year: \$ _____ ** Percent that is biotechnology: _____ %

D. Expected revenues for your current fiscal year: \$ _____ **

Percent of revenues derived from biotechnology: _____ % **

Percent of revenues that is interest income: _____ % **

Date your fiscal year ends: _____

III. Management Choices and Preferences Over Time.

A. For each time period, please rate the importance to your company of the following activities, from 1 (Low Importance) to 5 (High Importance). Also, please indicate the percentage of each of these activities that are carried out externally to your company, as opposed to in-house:

1. <u>IN FIRST YEAR</u>	RATING (1-5)	% EXTERNAL
Research	_____	_____ %
Product Development	_____	_____ %
Manufacturing	_____	_____ %
Marketing	_____	_____ %
2. <u>NOW</u>	RATING (1-5)	% EXTERNAL
Research	_____	_____ %
Product Development	_____	_____ %
Manufacturing	_____	_____ %
Marketing	_____	_____ %
3. <u>EXPECTED IN 5 YEARS</u>	RATING (1-5)	% EXTERNAL
Research	_____	_____ %
Product Development	_____	_____ %
Manufacturing	_____	_____ %
Marketing	_____	_____ %

B. How would you rate the relative proportion of Science to Business in your total operation (as a percent; Science plus Business should equal 100%):

	IN 1st YEAR	NOW	IN 5 YEARS
Science/Technology	_____ %	_____ %	_____ %
Business	_____ %	_____ %	_____ %
TOTAL	100%	100%	100%

C. For the contractual relationships external to your company, how would you weight the relative proportion (as percent of total external relationships) of:

	IN 1st YEAR	NOW	IN 5 YEARS
Academic Relationships	_____ %	_____ %	_____ %
Government Relationships	_____ %	_____ %	_____ %
Large Corporation Relationships, US	_____ %	_____ %	_____ %
Large Corporation Relationships, Foreign	_____ %	_____ %	_____ %
Small Company Relationships	_____ %	_____ %	_____ %
OTHER (describe) _____	_____ %	_____ %	_____ %
TOTAL EXTERNAL RELATIONSHIPS	100%	100%	100%

D. Please rate the importance of the following sources of expertise for their importance to your company, from 1 (Low Importance) to 5 (High Importance):

	IN 1st YEAR	NOW	IN 5 YEARS
1. Scientific Advisory Boards	_____	_____	_____
2. Technical/Scientific Consultants	_____	_____	_____
3. Business/Management Consultants	_____	_____	_____
4. Board of Directors	_____	_____	_____
5. Venture Capitalists	_____	_____	_____
6. Other Companies	_____	_____	_____
7. Other (describe) _____	_____	_____	_____

E. Please rate the desirability to your company of each source of income and financial support among the following choices, from 1 (No Desirability) to 5 (High Desirability):

	IN 1st YEAR	NOW	IN 5 YEARS
1. Equity Financing	_____	_____	_____
2. Exclusive Licensing	_____	_____	_____
3. Non-Exclusive Licensing	_____	_____	_____
4. R & D Partnerships	_____	_____	_____
5. Joint Ventures	_____	_____	_____
6. Research Contracts	_____	_____	_____
7. Acquisitions in Related Fields	_____	_____	_____
8. New Business Ventures/Spinoffs	_____	_____	_____
9. Venture Capital	_____	_____	_____
10. Stock Offerings	_____	_____	_____
11. Government Contracts (SBIR's, etc.)	_____	_____	_____
12. Other(describe) _____	_____	_____	_____

IV. **Company Competition:** Please rate the following sources of competition according to how formidable a competitor you feel each represents. Rank each from 1 (no competition from that group) to 5 (strong competition from that group):

	IN 1st YEAR	NOW	IN 5 YEARS
1. Other Biotech Companies, US	_____	_____	_____
2. Other Biotech Companies, Japan	_____	_____	_____
3. Other Biotech Companies, European	_____	_____	_____
4. Large Corporations, US	_____	_____	_____
5. Large Corporations, Japan	_____	_____	_____
6. Large Corporations, European	_____	_____	_____
7. Academic Laboratories	_____	_____	_____
8. Government Laboratories	_____	_____	_____

V. **YOUR COMPANY'S FUTURE:** What do you foresee your company will look like in five years? Rate each statement from 1 (no likelihood) to 5 (highly likely):

<u>Statement:</u>	<u>Likelihood in 5 years:</u>	<u>Statement:</u>	<u>Likelihood in 5 years:</u>
1. Profitable	_____	6. Rapidly growing	_____
2. Acquired	_____	7. A research boutique	_____
3. Out of business	_____	8. Different top management than now	_____
4. More than twice the 1986 sales	_____	9. Manufacturing our own products	_____
5. Steadily growing	_____	10. A strong marketing organization	_____

Thank you for your assistance. Please make sure that all questions are answered and mail this questionnaire back in the envelope provided. We would appreciate your response within 2 weeks.

Name of Respondent: _____

Date: _____, 1987

Title in Company: _____

Years with Company: _____



NORTH CAROLINA BIOTECHNOLOGY CENTER

BOX 13547 • RESEARCH TRIANGLE PARK, N.C. • 27709-3547 919-541-9366

January 7, 1987

&name&
&institution&
&address&
&city&, &state& &zip&

Dear &last&:

Thank you for agreeing to assist our efforts. We are a private, non-profit Center and are working under contract with the U.S. Congressional Office of Technology Assessment (OTA) as part of its latest examination of the biotechnology industry. The information your company provides will ensure that you are properly represented in the industry profile.

Our four-page questionnaire, enclosed with this letter, will enable the OTA to include information on your company in its studies. The questions will also provide us with a profile of your company, its past, and an indication of how you expect to grow. The questionnaire should take 20-30 minutes to complete. Please return the completed form within two weeks.

The answers will be used to provide a clearer understanding of the biotechnology industry, management choices, and business preferences. Your cooperation will assure the strength and accuracy of this research. The majority of questions relate to information we are collecting for the OTA. Other questions relate to management and business-related academic studies I am conducting in collaboration with Duke University's Fuqua School of Business and the Management and Technology Program of the Wharton School of Business. To thank you for your cooperation, we will be sending you early copies of any publications related to the data you provide.

You will notice that sensitive questions are marked with asterisks. Individual answers to these questions will be kept confidential. You may similarly mark other answers, if you wish them held in confidence. These marked data will only be used in aggregate form.

The printed information on your company you have agreed to send us will be of critical importance to this study. We need immediately annual reports, press releases, 10-K forms, general company literature, and articles written about your company. In addition to the items you send now, it is important that we be added to your mailing list so that we can continually receive information about your company to keep our research up to date.

If you have any questions about our studies, please feel free to call me at (919) 541-9366. Thank you again for your help.

Sincerely yours,

Mark D. Dibner, Ph.D.
Director of Business Studies

Enclosures

NCBC BUSINESS STUDIES PROGRAM
BIOTECHNOLOGY COMPANIES DATABASE
MARCH 1987

COMPANIES WHICH COULD NOT BE CONTACTED

DISCONNECTED PHONES, NO NEW LISTINGS:

COMPANY NAME:

Applied DNA Systems
Biochemical R&D Company
Biodx
Biomass International
Bio-Recovery Technology, Inc.
Dimension Diagnostics
Membrana
Mutech
Replicon
Ultraferm
Unogen
Xytronix

CHANGE OF NAME

Old Name	New Name
Automated Medical Labs	Medicore Corp.
Axonics	3M Diagnostic Systems
Carcinex, Inc.	Intek Diagnostics, Inc.
Cordis Laboratories, Inc.	Diamedix, Inc.
Cytox Corp.	Polybac Corp.
Diagnostic, Inc.	Lifecore, Inc.
International Medical Diagnostics	Porton Medical Labs
Issaquah Health Research Instit.	Seattle Biomedical Res
Molecular Biotech, Inc.	Moleculon, Inc.

OTHER CHANGES

American Biodesign, Inc.-see Biotechnology Development
American Biogenics-owned by Bioassay Systems Corp.
Anitech, Inc.-"now a meaningless business entity"
Bioqual, Inc.-Public- bought by Diagon
BW Biotec, Inc.-1984 Joint Venture with Toyo Engineering, now
defunct, a consulting firm.
Catalytica Associates, Inc.-Private
Celetek, Inc.-1980 private, co is going out of business by 2/87
Clinical Reference Labs- not a separate company, connected with
Enzyme Technology, Inc.
Immune Systems-defunct, company never got off the ground,
founder is now a consultant.
Intern'tl Genetic Sciences- 1982 J-V bet 1st Mississippi and Int. Gen.
Sci., research facilities in Jerusalem, Israel.
Moleculon-now pharmaceutical manufacturer of transdermal drug
delivery systems.
SDS Biotech -1983 former subs. of Diamond Shamrock Co & Jpn
Co, bought by Fermenta, see also Ricerca.
Vertex Corp.,Bioprocess Div.-1980 Pri-Rech. Ptnshp:Rintekno
oy,Espoo, Finland. Manufacturing, sales &
service; Santa Fe Springs, Ca.
Vivotech-no longer exists-was a venture of Damon Biotech

NCBC Business Studies Program

CLASSIFICATION CODES FOR COMPANIES:

A	AGRICULTURE, ANIMAL
B	AGRICULTURE, PLANT
C	BIOMASS CONVERSION
D	BIOSENSORS/BIOELECTRONICS
E	BIOSEPARATIONS
F	BIOTECHNOLOGY EQUIPMENT
G	BIOTECHNOLOGY REAGENTS
H	CELL CULTURE, GENERAL
I	CHEMICALS, COMMODITY
J	CHEMICALS, SPECIALTY
K	DIAGNOSTICS-CLINICAL HUMAN
L	ENERGY
M	FOOD PRODUCTION/PROCESSING
N	MINING
O	PRODUCTION/FERMENTATION
P	THERAPEUTICS
Q	VACCINES
R	WASTE DISPOSAL/TREATMENT
S	OTHER-NONCLASSIFIED
T	MARINE BIOTECHNOLOGY
U	CONSULTING
V	VETERINARY
W	RESEARCH
X	IMMUNOLOGICAL PRODUCTS
Y	TOXIN TESTING

April 1987 .

Section III Summary of Findings and Profile of a Biotechnology Company.

In this report we have included data from 296 companies that were selected for their direct involvement in the new biotechnologies. For more sensitive and proprietary data, we have analyzed and provided aggregate numbers from the 137 companies that returned our questionnaire and provided primary data. We thus present analyses of financing, financial data, personnel, areas of interest, and other aspects of the biotechnology industry.

This analysis of the biotechnology industry has yielded information on many aspects of the industry broken down by company size, area of interest (generally six key areas of primary interest suggested by the OTA staff--animal agriculture, plant agriculture, reagents, specialty chemicals, human diagnostics and therapeutics) and status of financing. Thus, the ensuing pages contain literally hundreds of assessed values and need to be carefully studied. The following are some general observations of major trends in the data in this report.

Section II--Methods

1. Our program of contacting biotechnology companies has indicated that many have changed top management within the past year (approximately 20%), and many have changed address or phone number since the last compilations were published in early 1986 (approximately 25%).
2. A number of companies have quietly gone out of business or have changed their status of working directly with the new biotechnologies (approximately 7% in 1986). Also, many of the listings and descriptions of activities of biotechnology companies are highly different from the actual data than what is contained in the commercially available directories. Thus, the data used for this report is either what we could ascertain from more than one source (only approximately 20% of the report) or data taken directly from company sources (approximately 80%). Of companies in the major breakdown areas (e.g., private/public/subsidiary) we had a similar representation in the returned questionnaires (42%±6%). The only exception was for the joint venture companies where only 2 of 7 returned questionnaires (29%).

Section IV Biotechnology Companies

1. By far, the most biotechnology companies in the U.S. reside California (88 of 296, or 30%). This is followed by Massachusetts (34 or 11%), New Jersey (24 or 8%), New York (17 or 6%) and Maryland (15 or 5%). (Section IV-B)
2. Section IV-E lists 56 major U.S. corporations that have been determined to have major efforts in biotechnology, although biotechnology is not the primary

focus these companies. The primary focus and biotechnology related products are shown in this section.

3. As shown in Sections IV-H and IV-I, the boom for founding biotechnology companies occurred between 1980 and 1984. During these years, approximately 60% of the companies were founded. In another study we have completed on the biotechnology industry founders, we demonstrated that the mean and average biotechnology companies were founded in 1981 by 2.4 founders. (Dibner, MD, "Commercial Biotech's Founding Fathers", Bio/Technology, June 1987) Of the 292 founders representing 121 companies in our sample, only 5.4% were women, 44% came from industrial positions and 38% came from academic positions.

4. As described in Section IV-J, we found a number of companies to have "Died" in 1986 and a number of companies to have dropped out of independent entity status over the past few years. Since these companies were not represented in the 296, they could not be subtracted from the list. The evidence is, however, that more companies are dropping out than are being founded. Thus, the biotechnology industry, as measured by small companies in the field, is most likely stabilized or shrinking. The industry, as measured by large corporation efforts, is probably growing, although this is not a focus of this report.

5. The average biotechnology company that responded to the questionnaire (106 companies of 137 answered this section) had an 84% focus on biotechnology. The median company had a 100% focus. Many companies had dual or multiple efforts in rDNA, MAb's and Cell Culture; the average company had an approximately 40% effort in each of these categories. (Sections IV-K and IV-L).

Section V Financing

1. Most biotechnology companies in the database are still privately held (59%) while 28% have made public stock offerings. (Section V-C)

2. One quarter of the respondents have had no equity purchased in their company by U.S. or Foreign corporations. Thus, the remaining 75% had equity held in their companies. 47% of the companies had only one major equity holder, whereas 28% had multiple equity holders. In addition, 28% of the companies had at least one foreign equity holder. (Section V-F)

3. Almost 90% of small companies had no or only one major equity purchasers. In contrast, the larger companies had more than one major equity purchaser in 40% of the cases. (Section V-G)

4. Approximately 60% of the companies had private investment listed as their major source of funding in the first year of their existence with only 2-3% having

public stock offerings in their first year. The current primary funding of the same companies is listed as public stock offering in about 20% of the cases and private investment has fallen to below 45% of the companies. Thus, over time the average company shows a decreased dependence on private investment, a doubling of U.S. equity holders and a ten-fold increase in public stock offerings. (Section V-H)

5. Although the number of companies responding ranged from 5 to 26, it appears that companies involved in therapeutics have the most public stock offerings, where as companies involved in diagnostics, reagents, animal agriculture and specialty chemicals have remained financed by private investment. (Section V-K)

Section VI Financial information

1. Financing is five times higher in public companies than in those that are still private. This is most likely due to the financing involved in the public offering. As would be expected, financing is much higher in large companies (average 267 employees) than in small companies (average 11 employees) by 19 fold. The companies involved with therapeutics had more than twice the average financing of all companies. Companies working with biotechnology reagents had the least amount of financing (about one-third the average). (Table VI-A)

2. Expected revenues for the current fiscal year averaged less than \$10 million per company. Subsidiary companies had the highest expected revenues, followed by public companies. The private firms had, on average, only 45% of the expected revenues of the average of all firms. (However, when the percentages of R and D Budget to expected revenues for all companies are averaged, the average firm spends almost its entire revenues on R and D! This is most likely due to a few firms in all categories with a small amount of expected revenues but very high R and D budgets) As would be anticipated, expected revenues increased by company size. On average, the small companies had less than \$1 million expected revenues, whereas the large companies had more than \$28 million in expected revenues. When expressed as expected revenues per employee, there was also a trend to increase with company size, but large companies had only 23% more expected revenues per employee than small companies. Expected revenues were highest in companies involved in plant agriculture and human diagnostics, and lowest in companies involved in animal agriculture and specialty chemicals. However, when expressed as expected revenues per employee, the highest are in plant agriculture and specialty chemicals and the lowest are in animal agriculture and therapeutics.

3. Interest only accounts for 7.7% of expected revenues on average whereas biotechnology efforts account for 82.9% on average.

4. The R and D budget for biotechnology companies on average was \$4 million on average, or more than 40% of the expected revenues (higher when examined in the average company--see above). This budget was more than four times larger in public companies than in private companies. Subsidiary companies, although financed on average at half the level of public companies, had an R and D budget almost 42% higher than the public companies. When expressed per employee, the subsidiary companies had more than twice the R and D budget than either the public or private companies. As would be expected, R and D budget increased with company size, and was only slightly larger in the large firms when compared to the small ones when expressed per employee. The R and D budget was smallest in the companies in the reagents category (one-third of average) and twice the average in the therapeutics category. The therapeutics category also had the highest R and D budget when expressed per employee. (Table VI-A)

5. The Tables and figures in sections VI-B to VI-K give a graphic representation of the data described above.

Section VII Areas of interest

1. The greatest number of companies are working in the human health area, followed by the agriculture area. Two-thirds of the companies are working with diagnostics or therapeutics, while almost one-third of the companies are working with plant agriculture, animal agriculture or veterinary medicine. (Tables VII-E to VII-G)

Section VIII Personnel

1. The average company had 86 employees, the median had 30 employees. Private companies averaged 40 employees while public and subsidiary companies were approximately equal in size with approximately 165 employees.

2. Of the company classifications, the therapeutics, plant agriculture and diagnostics companies were the largest with approximately 120 employees. The specialty chemicals and reagents companies were the smallest with 30 to 45 employees. (Table VIII-F)

3. Scientific personnel make up more than 50% of the total personnel. Of these, more than one-third are Ph.D.'s. Approximately one-half of the scientific personnel are in basic science.

4. Management/administrative personnel make up approximately one-quarter of the companies, on average. Sales and production together make up one-quarter of personnel.

5. Small companies have a larger percent of total employees who hold doctorate degrees than medium or larger companies. Subsidiaries have more employees in basic science than public or private companies. Public companies have about half the management staff as percent of total employees than do private companies. (Table VIII-E)

6. There is little variation in the percent of total employees in science or technology between any of the breakdown classifications. However, the percent of scientific employees in basic research is highly varied--almost three times as high in the therapeutics companies than in animal agriculture.

7. The specialty chemicals and reagents companies have 5 times the percent of people in sales than do the animal agriculture companies. Similarly, the specialty chemicals and reagents companies have more than ten times the number of people in production than do the animal agriculture companies.

8. When the employee data are extrapolated for the industry (296 companies), there are almost 25,500 employees involved in biotechnology. The large corporations involve many more people related to biotechnology: a reasonable estimate would be 150 on average, for a total of 8000; or 33,500 employees in the U.S. related to the biotechnology industry.

Section IX Patents and Products

1. Our data, when extrapolated, would predict that the biotechnology industry is responsible for more than 8000 patent applications on file (U.S.). The average company has 1.5 patents per year with twice that figure expected for 1987! The companies in our sample were responsible for almost 300 patents in 1986 (extrapolated to 850 for the entire industry). (Section IX-A and IX-E)

2. The average company had 20 to 30 products per year and, interestingly, the number in 1987 and 1988 is not expected to increase dramatically. As would be expected, the reagents and specialty chemicals companies are responsible for many more products than the plant agriculture or pharmaceutical companies.

3. Interestingly, the small companies had more products than larger companies, on average. Similarly, privately held companies had more products than public companies.

4. In contrast, large companies had 37 times as many patent applications than small companies. Public companies had more than 8 times as many patent applications than privately held companies. (Table IX-A)

And finally.....

If one were to extrapolate some of our data to encompass all 296 companies (but not include large corporations), the following figures emerge:

1. A total of \$5.6 Billion in Financing.
2. A total of \$2.89 Billion in expected revenues: \$1.5 Billion from biotechnology activities in the current fiscal year.
3. A total of 8080 patent applications now on file.
4. A total of 25,500 employees, including 5300 at the Ph.D. level.
5. A total of \$1.2 Billion in R and D expenditures.

A profile of the average U.S. biotechnology company follows.

Table III-B: The Average U.S. Biotechnology Company

Category	Value	Range
Total Employees:	86	2-1000
% Scientists	54.3%	6-100
% Ph.D.s	20.8%	0-75
% Management/admin.	26.1%	0-100
Year Founded	1981	1911-1986
No. of Founders	2	1-6
Financing	\$19MM	\$10M-\$320MM
Percent of efforts that are biotechnology	83%	8-100%
R & D Budget	\$4.0MM	\$10M-\$45MM
Expected revenues this year	\$9.8MM	\$80M-\$123MM
Patent applications on file	27.3	0-530
Products marketed 1981-1988	87.6	0-2260

4/87 NCBC

Taken from questionnaire data from 137 companies.

Table III-C: U. S. Biotechnology Company Profile: Mean and Median Data

<u>Category</u>	<u>Mean Value</u>	<u>Median Value</u>
Percent of efforts that are biotech.	83%	100%
Employees	86	30
Current expected annual revenues	\$9.8 MM	\$2.8 MM
R and D Budget	\$4.0 MM	\$1.5 MM
Total financing	\$19 MM	\$8 MM
Total products introduced ('81-'88 exp)	88	11
Patent applications on file	27	3

4/87 NCBC

Mean vs. median values for biotechnology company profiles. Data are from 137 companies that returned questionnaires.

Section IV Biotechnology Companies in the Database

IV-A is a listing of the 296 companies included in this study, sorted by company. Also given are the state of origin, year of founding and a small part of the product information field.

	COMPANY NAME	STATE	YEAR	PRODUCTS
1	A/G TECHNOLOGY CORP.	MA	1981	GAS SEPARATION;ULTRA & MI
2	ADVANCED BIOTECHNOLOGIES	MD	1982	MEDIA, SERA, GROWTH FACTO
3	ADVANCED GENETIC SCIENCES	CA	1979	RESEARCH FOR AGRI, FROSTB
4	ADVANCED GENETICS RES. INST	CA	1980	VETERINARY VACCINES
5	ADVANCED MAGNETICS, INC.	MA	1981	DIAG RIA KITS, MAG SEPARA
6	ADVANCED MINERAL TECHNOLOGI	CO	1982	WASTE TREAT & METAL RECOV
7	AGDIA, INC.	IN	1981	PLANT AND FOOD TOX DX FOR
8	AGOURON INSTITUTE	CA	1979	BASIC RESEARCH IN BIOTECH
9	AGRACETUS	WI	1981	TERMITICIDE, VACCINES, MI
10	AGRI-DIAGNOSTICS ASSOCIATES	NJ	1984	TURF & CROP DISEASE DIAGN
11	AGRIGENETICS CORPORATION	OH	1980	SEED AND PLANT GENETICS
12	AGRITECH SYSTEMS, INC	ME	1984	IMMUNOASSAYS
13	AGROTEK	CT	1983	PESTICIDES, NEMATODES
14	ALFACELL CORPORATION	NJ	1981	TUMOR TOXINS, REAGENTS, S
15	ALLELIC BIOSYSTEMS	WV	1984	VET TOX TESTS, PROBES, OL
16	ALPHA I BIOMEDICALS	DC	1982	PEPTIDES TO PREV,DIAG &TR
17	AMBICO, INC.	IA	1974	VET VACCINES;
18	AMERICAN BIOCLINICAL	OR	1977	REAGENTS;DX KITS;
19	AMERICAN BIOGENETICS CORP	CA	1984	PROCESS DESIGN MICROORGAN
20	AMERICAN BIONETICS, INC (AB	CA	1981	ORGANIC & BIOCHEM COMPDs
21	AMERICAN BIOTECHNOLOGY CO	MD	1984	GROWTH FACTORS
22	AMERICAN DIAGNOSTICA, INC.	CT	1983	T-PA ELISA, T-PA ACTIVE A
23	AMERICAN LABORATORIES, INC	NE	1962	RAW MATERIALS OF BIOTECHN
24	AMERICAN QUALEX INTL, INC	CA	1981	ANTIBODIES;ENZYMES;DNA-PR
25	AMGEN	CA	1980	RESEARCH REAGENTS EGF, IG
26	AMTRON	SC	1981	ANIMAL DISEASE PREVENTATI
27	AN-CON GENETICS	NY	1982	EQUIP;INSTRU
28	ANGENICS	MA	1980	SCREENING TESTS FOR MILK
29	ANTIBODIES, INC.	CA	1961	VET DX
30	ANTIVIRALS, INC	OR	1980	NEU-GENES FOR DIAGN & THE
31	APPLIED BIOSYSTEMS	CA	1981	DNA SYNTHESIZER;PEPTIDE S
32	APPLIED BIOTECHNOLOGY	MA	1984	VET VACCINES;HUMAN VACCIN
33	APPLIED GENETICS LABS. INC.	FL	1984	GENETIC TOX TEST
34	APPLIED MICROBIOLOGY	NY	1983	HEALTH CARE
35	APPLIED PROTEIN TECHNOL. IN	MA	1984	INSTRU TO AUTOMAT PEPTIDE
36	ATLANTIC ANTIBODIES	ME	1973	IMMUNODX TEST KITS; REAGE
37	AUTOMEDIX SCIENCES, INC	CA	1976	NONE AS YET, STAFFING STA
38	BALL BIOTECH COMPANY	IL	1985	PLANT VARIETIES
39	BEHRING DIAGNOSTICS	CA	1952	ANTIBDS;REAGENTS-CALBIOCH
40	BEND RESEARCH, INCORPORATED	OR	1975	SEPARATION;BIOSENSORS;IMM
41	BENTECH LABORATORIES	OR	1984	YIELD ENHANCING AGENT;ANT
42	BERKELEY ANTIBODY	CA	1983	DEVELOP CUSTON ANTIBODIES
43	BETHYL LABS INC.	TX	1977	ANTISERA & CUSTOM ANTISER
44	BINAX, INC	ME	1986	MABS, DX TEST KITS,VET D
45	BIO HUMA NETICS	AZ	1984	SOIL CONDITIONERS;FEED SU
46	BIO TECHNIQUES LABS., INC.	WA	1982	FEED ADDITIVES;
47	BIO-RECOVERY, INC.	NJ	1983	MEMBRANE SYSTEMS FOR FILT

	COMPANY NAME	STATE	YEAR	PRODUCTS
48	BIO-RESPONSE INC.	CA	1972	TPA;MASS CELL CULTURE;
49	BIO-TECHNICAL RESOURCES, IN	WI	1962	YEAST/BACT PRODS IN FOOD,
50	BIOASSAY SYSTEMS CORP.	MA	1977	ANAL., PURIF, TESTING OF
51	BIOCHEM TECHNOLOGY INC	PA	1977	COMPUTER PRODS & SOFTWARE
52	BIOCLINICAL SYSTEMS, INC	MO		DIAGNOSTICS
53	BIOCONSEP, INC.	NJ	1983	BIOL SEPARATIONS R AND D
54	BIOCONTROL SYSTEMS	WA	1985	TESTS FOR FOOD WATER ETC,
55	BIOGEN	MA	1979	HEPATITIS B CORE ANTIGEN
56	BIOGENEX LABORATORIES	CA	1981	DIAGN TESTS-RIA; IMM'HIS'C
57	BIOLOGICAL ENERGY CORP.	PA	1981	BIOMASS CONV FOR ALCOHOLS
58	BIOLOGICS CORP	NE	1966	PSEUDORABIES VACCINE
59	BIOMATERIALS INTERNATIONAL,	UT	1981	RAMAN TECH FOR RESPIR APP
60	BIOMATRIX, INC.	NJ	1981	MATERIAL FOR ARTIF ORGANS
61	BIOMED RESEARCH LABS INC	WA	1974	FISH BIOLOGICS, VET
62	BIOMEDICAL TECHNOLOGIES	MA	1981	CELL CULTURE REAGENTS; AN
63	BIONETICS RESEARCH	MD	1986	CLINICAL DIAGNOSTICS; RESE
64	BIONIQUE LABS INC.	NY	1982	CULTUR CHAMBER; MYCOPLASMA
65	BIOPOLYMERS, INC.	CT	1984	CELL & TISSUE ADHESIVE; O
66	BIOPROBE INTERNATIONAL, INC	CA	1983	SPECIALIZED GELS; SEPARAT
67	BIOPRODUCTS FOR SCIENCE, IN	IN	1985	ANTIBODIES; ANTIGEN MARKER
68	BIOPURE	MA	1984	CUSTOM FERM. OF THERAP, M
69	BIOSCIENCE MANAGEMENT INC.	PA	1984	BACTERIAL CULTURES; INNOCU
70	BIOSEARCH, INC.	CA	1977	REAGENT CHEMICALS AND GEN
71	BIOSPHERICS	MD	1967	WASTEWATER PROCESS & MONI
72	BIOSTAR MEDICAL PRODUCTS, I	CO	1983	DIAGNOSTICS & TEST KITS F
73	BIOSYSTEMS, INC.	GA	1976	GENERAL R AND D MICROBIAL
74	BIOTECH RESEARCH LABS, INC	MD	1973	MABS FOR DIAGNOSTICS, IL-
75	BIOTECHNICA INTERNATIONAL	MA	1981	DIAG TEST; INNOCULANT, LI
76	BIOTECHNOLOGY DEVELOPMENT C	MA	1982	EQUIPMENT, CONSULTING, REA
77	BIOTECHNOLOGY GENERAL CORP.	NY	1980	SOD, BGH, HGH
78	BIOTEST DIAGNOSTICS CORP	NJ	1946	REAGENTS AND MAB MARKERS
79	BIOTHERAPEUTICS, INC.	TN	1984	SPECIALTY BIOLOGICAL RESP
80	BIO THERAPY SYSTEMS, INC.	CA	1984	MABS FOR CANCER THERAPY
81	BIO THERM	NC	1986	DIAGNOSTICS
82	BIOTICS RESEARCH CORPORATIO	TX	1975	NUTRITIONAL SUPPLEMENTS
83	BRAIN RESEARCH INC.	NY	1968	CANCER DIAGNOSTICS
84	BREIT LABORATORIES	CA	1983	MAB BASED DISPOSABLE MEDI
85	CALGENE, INC.	CA	1980	TOMATOES, COTTON, FOOD PRO
86	CALIFORNIA BIOTECHNOLOGY IN	CA	1981	QUESTIONNAIRE STATES ZERO
87	CALIFORNIA INTEGRATED DIAGN	CA	1981	MAB TEST KITS FOR DIAG OF
88	CALZYME LABORATORIES, INC.	CA	1983	ENZYMES & BIOCHEMICALS
89	CAMBRIDGE BIOSCIENCE CORP.	MA	1981	DX KITS FOR AIDS, ADENOV
90	CENTOCOR	PA	1979	DIAGNOSTIC BLOOD TESTS FO
91	CETUS CORPORATION	CA	1971	INTERFERON; INTERLEUKIN-2;
92	CHARLES	NY	1982	DIPSTIK DIAGNOS TESTS KIT
93	CHARLES RIVER BIOTECH. SERVI	MA	1983	MABS, CULTURE SYSTEMS
94	CHEMGENES	MA	1981	INTERMEDIATES FOR DNA SYN

COMPANY NAME	STATE	YEAR	PRODUCTS
95 CHEMICAL DYNAMICS CORP.	NJ	1972	DNA TECHNOL REAGENTS, RE'
96 CHEMICON INTERNATIONAL, INC	CA	1981	MABS; GRWTH FCTRS;MTT KIT
97 CHIMERIX	CT	1983	CLINICAL TESTING PRODS RE
98 CHIRON CORPORATION	CA	1981	DIAGN FOR AIDS;DNA PROBE
99 CISTRON BIOTECHNOLOGY, INC.	NJ	1984	IL-1, 1L-2
100 CLINICAL BIOTECHNOLOGIES, I	KS	1986	ENZYMES FOR FOOD PRODS,DA
101 CLINICAL SCIENCES, INC.	NJ	1971	BIOCHEMICALS FOR DIAGNOS
102 CLONTECH LABORATORIES, INC.	CA	1984	CDNA LIBRARIES, REAGENTS,
103 CODON	CA	1980	VET VACCINES, HUMAN DIAGN
104 COLLABORATIVE RESEARCH INC.	MA	1961	RESEARCH REAGENTS, PEPTID
105 COLLAGEN CORPORATION	CA	1975	MEDICAL DEVICES;COLLAGEN
106 CONSOLIDATED BIOTECHNOLOGY,	IN	1983	ENZYMES, SOME FOOD RELATE
107 COOPER DEVELOPMENT CO.	CA	1980	ALPHA1 ANTITRYPSIN, DRUGS
108 COORS BIOTECH PRODUCTS CO.	CO	1984	INDUS DEGREASER; FOOD PRO
109 CORNING BIOMEDICAL RESEARCH	MA	1984	HIGH FRUCTOSE CORN SYRUP,
110 COVALENT TECHNOLOGY CORP.	MI	1981	RAPID DIAGN ASSAY FOR STD
111 CREATIVE BIOMOLECULES	MA	1981	PEPTIDES, CONTRACT R AND
112 CROP GENETICS INTERNATIONAL	MD	1981	DISEASE FREE SUGARCANE SE
113 CYANOTECH CORPORATION	WA	1983	PHYCOBILIPROTEIN;SPIRULIN
114 CYGNUS RESEARCH CORP.	CA	1985	DRUG DELIV'Y SYST;CONTRAC
115 CYTOGEN CORP	NJ	1980	THERAPEUTIC MABS AND DIAG
116 CYTOTECH, INC	CA	1982	AIDS DIAGNOSTICS, REAGENT
117 CYTOX CORPORATION	PA	1975	WASTE, AG, POLLUTION, ENE
118 DAKO CORP	CA	1979	POLY AND MONO AB'S, CLIN
119 DAMON BIOTECH INC.	MA	1978	MABS, DRUG DELIV PRODS,CE
120 DEKALB-PFIZER GENETICS	IL	1982	HYBRID SEEDS, CORN, SOY,
121 DELTOWN CHEMURGIC CORP.	CT	1968	PEPTONES AND HYDROLASES F
122 DIAGNON CORP.	MD	1981	ASSAYS-FERRITIN,B12/FOLAT
123 DIAGNOSTIC PRODUCTS, CORP.	CA	1972	DIAGNOSTIC KITS
124 DIAGNOSTIC TECHNOLOGY, INC.	NY	1980	DIAGNOSTICS, BLOOD TEST K
125 DIAMEDIX, INC.	FL	1986	DIAGN KITS FOR INFECT & A
126 DNA PLANT TECHNOLOGY CORP.	NJ	1981	FOODS AND PLANTS, AGRICUL
127 DNAX	CA	1980	RESEARCH SUB OF SP; NO PR
128 E-Y LABORATORIES, INC	CA	1978	ANTISERA;CARB RECOGN FACT
129 ELECTRO-NUCLEONICS, INC.	NJ	1960	INTERLEUKIN-2;HTLV-III AN
130 EMBREX, INC.	NC	1985	BIOLOGICALS FOR IN-OVO AP
131 EMTECH RESEARCH	NJ	1983	BIOTECH R&D FOR COSMETICS
132 ENDOTRONICS, INC.	MN	1981	APS SERIES;ACUSYST-P;VACC
133 ENGENICS, INC.	CA	1981	STRAIN PROD'N, SEPARATION
134 ENVIRONMENTAL DIAGNOSTICS,	NC	1983	ENVIRON AND TOXIN TESTING
135 ENZO BIOCHEM, INC.	NY	1976	ENZYMES;LETINS;FILTERS;NU
136 ENZON	CA	1965	SOD FOR HUMAN AND VET USE
137 ENZON, INC.	NJ	1981	HUMAN THERAPEUTICS;ENZYME
138 ENZYME CENTER INC., THE	MA	1978	LG SCALE FERMENT;SEPAR &
139 ENZYME TECHNOLOGY CORP.	OH	1981	GLOCOAMYLASE ENZYME; A-AM
140 EPI TOPE, INC.	OR	1979	RED CELL & HLA MCS; VIRAL
141 EXOVIR, INC.	NY	1981	TOPICAL FOR HSV-II

COMPANY NAME	STATE	YEAR	PRODUCTS
142 FERMENTEC CORP	CA	1981	WHEY CONVERSION PLANT AND
143 FLOW LABORATORIES, INC.	VA	1961	MEDIA, FERMENT EQUIP, REA
144 GAMETRICS, LTD.	MT	1974	HUMAN CHILD SEX SELECT, I
145 GAMMA BIOLOGICALS, INC.	TX	1969	REAGENT-BASED DX TESTS FO
146 GEN-PROBE, INC.	CA	1984	DNA PROBE TECH FOR RESEAR
147 GENENCOR, INC.	CA	1982	FOOD PROCESS AND CHEMICAL
148 GENENTECH	CA	1976	INSULIN, HGH, TPA, HSA, I
149 GENESIS LABS, INC.	MN	1984	BLOOD GLUCOSE TEST; THERA
150 GENETIC DIAGNOSTICS CORP.	NY	1981	DIAGNOSTIC TEST KITS
151 GENETIC ENGINEERING, INC.	CO	1980	ANIMAL SEX SELECTION, BUL
152 GENETIC SYSTEMS CORP.	WA	1980	MAB BASED HUMAN DIAGNOST
153 GENETICS INSTITUTE, INC.	MA	1981	GM-CSF;EPO;TPA; GENE SPLI
154 GENEX INC.	MD	1977	COMMODO AND SPEC. CHEMICAL
155 GENTRONIX, INC.	MD	1972	BIOCHIPS, BIOELECTRONICS
156 GENZYME CORP.	MA	1981	BIOLOGICALS FOR HUMAN HEA
157 GLEN MILLS, INC.	NJ	1980	OEM;CELL LYSING EQUIP; GL
158 GRANADA GENETICS CORP.	TX	1979	BULL GENETICS, SHRIMP, FO
159 HANA BIOLOGICS, INC.	CA	1979	CELL IMPLANTS TO TREAT DI
160 HAWAII BIOTECHNOLOGY GROUP,	HI	1982	IMMUNOTOXINS, PESTICIDE D
161 HAZLETON BIOTECHNOLOGIES GR	VA	1981	LAB REAGENTS AND EQUIPMEN
162 HOUSTON BIOTECH	TX	1984	OPHTHAMOLOGY AND NEUROLOGY
163 HP GENENCHEM	CA	1983	LAB INSTRUM
164 HYBRITECH, INC.	CA	1978	IMMUNOASSAYS;R&D MABS;
165 HYCLONE LABORATORIES	UT	1975	IMMUNOCHEM;ANIMAL SERA;HY
166 HYGEIA SCIENCES	MA	1980	OVULATION PREDICTOR; PREG
167 IDEC, INC.	CA		
168 IDETEK, INC.	CA	1983	DX TEST KITS FOR FOOD & A
169 IGEN	MD	1982	CONT. RESEARCH; MABS FOR
170 IGENE BIOTECHNOLOGY INC.	MD	1981	TM-MINRALAC;MACROMIN;WEYC
171 IMMUCELL CORPORATION	ME	1982	2 HUMAN DX;REAGENTS;3 ANI
172 IMMUNETECH PHARMACEUTICALS	CA	1981	IMMUN ACTIVE PEPTIDES AS
173 IMMUNEX CORP.	WA	1981	IL-2; GM-CSF; IL-1; IL-1B
174 IMMUNO MODULATORS LABS. INC	TX	1981	INTERFERONS;AIDS TH;COSME
175 IMMUNOGEN, INC.	MA	1981	DEV & MRKT CONJUGATED ABS
176 IMMUNOMED	FL	1979	IMMUNOTHERAPEUTICS
177 IMMUNOMEDICS, INC.	NJ	1983	AUTOIMM DIS ASSAY;ALLERGY
178 IMMUNOTECH CORP.	MA	1980	IMMUNODIAGNOSTIC TEST KIT
179 IMRE CORP	WA	1981	R & D FOR BLOOD PURIFIERS
180 IMREG, INC.	LA	1981	IMMUNOREGULATORS
181 IN VITRO INTERNATIONAL, INC	MD	1982	TYPE CULTURE DEPOSITORY
182 INCELL CORPORATION	WI	1981	PEPTIDE HORMONES;RES-YEAS
183 INFERGENE COMPANY	CA	1983	BAKING & BREWING STRAINS;
184 INGENE, INC.	CA	1980	BONE & CARTL HEAL;CA THER;
185 INTEGRATED CHEMICAL SENSORS	MA	1984	INSTRUMENTS AND BIOSENSOR
186 INTEGRATED GENETICS, INC.	MA	1981	DX DNA PROBES-SALMONELLA,
187 INTEK DIAGNOSTICS, INC.	CA	1983	T CELL CLONES, ANTIGENS,
188 INTELLI-GENETICS	CA	1980	GENETIC ENGIN SOFTWARE;ST

COMPANY NAME	STATE	YEAR	PRODUCTS
189 INTER-AMERICAN RESEARCH ASC	MD	1979	PURIFIED ANTIGENS, ANTISE
190 INTER-CELL TECHNOLOGIES, IN	NJ	1982	BIOLOGICALS;IMMUN'REAGENT
191 INTERFERON SCIENCES, INC.	NJ	1981	INTERFERON
192 INTERLEUKIN-2	VA	1983	LYMPHOKINES;AIDS VACCINE;
193 INTERN'TL ENZYMES, INC.	CA	1974	SERUM FREE MEDIA SUPPL;EN
194 INTERN'TL MINERAL & CHEMICA	IL	1970	ANIMAL GROWTH, HEALTH AND
195 INTERN'TL PLANT RESEARCH IN	CA	1978	DATE PALMS;GEN ENG REAGEN
196 INTRA GENE INTERNATIONAL IN	NY	1981	TECHNOLOGY EXHCANGE;LICEN
197 INVITRON CORP.	MO	1984	CONTRACT MANUF OF CELL PR
198 JACKSON IMMUNOREASEARCH LAB	PA	1982	AFFIN PURIF PROTEINS; PUR
199 KALLESTAD LABORATORIES	TX	1967	DIAGNOSTIC PRODUCTS
200 KARYON TECHNOLOGY, LTD.	MA	1984	TISSUE PROCESS CULTURE TE
201 KIRIN-AMGEN	CA	1984	R & D ON ERYTHROPOIETIN
202 LEE BIOMOLECULAR RESEARCH L	CA	1980	INTERFERONS;ANTI-INTERFER
203 LIFE SCIENCES	FL	1962	APPL RES.ON VIRUSES, ANIM
204 LIFECODES CORP.	NY	1982	REFERENCE LAB TESTS USING
205 LIFECORE, INC	MN	1975	HYALURONIC ACID, MEDICAL
206 LIPOSOME COMPANY INC.	NJ	1981	LIPOSOMES FOR DRUG DELIV
207 LIPOSOME TECHNLOGY	CA	1981	LIPOSOMES FOR PHARM, VET,
208 LUCKY BIOTECH CORP.	CA	1984	IFN, HEPATITIS-B DX,PORCI
209 MARCOR DEVELOPMENT CORP.	NJ	1976	REAGENTS FOR FERMENTATION
210 MARICULTURA, INC.	NC	1986	ALGAL PRODS. COSMET;FOOD;
211 MELOY LABORATORIES, INC.	VA	1970	SERVICES;REAGENTS; RESEAR
212 MICROBIO RESOURCES	CA	1981	FOOD ADDITIVES & COLORANT
213 MICROBIOLOGICAL ASSOCIATES	MD	1947	TOX TESTING FOR GOVT, SOM
214 MICROGENICS	CA	1981	DX ASSAYS; DIGOXIN ASSAY
215 MOLECULAR BIOSYSTEMS, INC.	CA	1980	DNA PROBES, AIDS SCREENIN
216 MOLECULAR DIAGNOSTICS, INC.	CT	1980	NONE, LICENSES ALL COMMER
217 MOLECULAR GENETIC RESOURCES	FL	1983	REV.TRANSCRIPTASE;TERM.TR
218 MOLECULAR GENETICS, INC	MN	1979	AG AND VET PRODS, SCOURS
219 MONOCLONAL ANTIBODIES, INC.	CA	1979	DIAGNOSTIC TEST KITS
220 MONOCLONAL PRODUCTION INT'L	KS	1983	MABS FORMED IN SHEEP/COW
221 MONOCLONETICS INTERNAT'L, I	TX	1984	HUMAN SCREENING TESTS & D
222 MULTIPLE PEPTIDE SYSTEMS IN	CA	1986	EQUIP; COMPLETE HF SYSTEM
223 MUREX CORP.	GA	1984	MAB REAGENTS & ANTIBODY K
224 MYCOGEN	CA	1982	PLANT HERBICIDES BASED ON
225 MYCOSEARCH, INC.	NC	1979	CULTURES OF RARE & NEW FU
226 NATIONAL GENO SCIENCES	MI	1980	UNKNOWN
227 NEOGEN CORP.	MI	1981	FOOD, PLANT HEALTH, ANIMA
228 NEORX CORP.	WA	1984	MELANOMA IMAGING AGENT-TE
229 NEUSHUL MARICULTURE	CA	1978	ANIT-VIRAL;ENZYMES;MOLLUS
230 NMS PHARMACEUTICALS	CA	1971	DIAGNOSTICS AND PHARMACEU
231 NORTH COAST BIOTECHNOLOGY I	OH	1986	ENZYMES FOR PHARMACEUTICA
232 NPI	UT	1973	POTATO & FLOWER SEEDS;SOI
233 NUCLEAR & GENETIC TECHNOLOG	NY	1980	RADIOLABELED MABS FOR CAN
234 NYGENE CORP.	NY	1985	BIOAFFINITY SEPARAT SYS;H
235 O.C.S. LABS	TX	1984	CUSTOM MADE SYNTHETIC GEN

COMPANY NAME	STATE	YEAR	PRODUCTS
236 OCEAN GENETICS	CA	1981	SPEC CHEMS & PHARMACEUT O
237 OMNI BIOCHEM, INC.	CA	1986	PEPTIDES;ENZYMES;AMINO AC
238 ONCOGENE SCIENCE, INC	NY	1983	ONCOGENE PROBS FOR DX AND
239 PEL-FREEZ BIOLOGICALS, INC.	AR	1911	VARIOUS SPECIALTY REAGENT
240 PENINSULA LABORATORIES, INC	CA	1971	PEPTIDES, ENZYMES, SPECIA
241 PETROFERM USA	FL	1977	MICROBIALS FOR IMPROVED F
242 PETROGEN INC.	IL	1980	MICROBES FOR IMPROVED OIL
243 PHARMACIA BIOTECHNOLOGY GRO	NJ	1960	CHROMA SEPARATION CHEMICA
244 PHARMATEC, INC	CA	1982	DRUG DEL'Y OF SYNTHETICS
245 PHYTOGEN	CA	1980	VECTOR FOR PLANT TRANSFOR
246 PLANT GENETICS, INC.	CA	1981	POTATO TR;HYBRID VEGS
247 PRAXIS BIOLOGICS	NY	1983	VACCINES, TEST KITS, THERAP
248 PROMEGA BIOTECH	WI	1978	REAGENTS FOR MOLECULAR BI
249 PROTATEK INTERNATIONAL, INC	MN	1985	VIRUS, TEST KITS, SPECIAL
250 QUEUE SYSTEMS INC	NJ	1980	CRYO PRESERVATION;CELL CU
251 QUIDEL	CA	1981	DX ASSAYS=PREG,FERT,STREP
252 R & A PLANT/SOIL INC.	WA	1978	ALGAL SOIL CONDITIONERS,
253 RECOMTEX CORP.	MI	1981	GENETIC DX
254 REPLIGEN CORP.	MA	1981	ENXYMES, PROTEINS,RECOMB
255 RESEARCH&DIAGNOSTIC ANTIBOD	CA	1985	DIAGNOSTIC KITS, MAB REAG
256 RIBI IMMUNOCHEM RESEARCH, I	MT	1981	VET-ANTI-TUMOR PROD;VET D
257 RICERCA, INC	OH	1986	FERMENTATION AND RESEARCH
258 SCOTT LABORATORIES	RI	1981	REAGENTS AND SPECIALTY CH
259 SCRIPPS LABORATORIES	CA	1980	BULK HUMAN PROTEINS;HORMO
260 SEAPHARM, INC.	NJ	1983	MARINE PHARMACEUTICAL PRO
261 SEPRACOR, INC.	MA	1984	MEMBRANE COLUMNS-ANTI-FAC
262 SERAGEN, INC	MA	1979	R & D IMMUNOLOGICS,REAGEN
263 SERONO LABS	MA	1971	DRUGS AND DXS IN FERTIL,G
264 SIBIA	CA	1981	SALK INSTITUTE'S RESEARCH
265 SOUTHERN BIOTECH ASSOCIATES	AL	1982	PRODUCE COLLAGEN AND ANTI
266 STRATAGENE CLONING SYSTEMS	CA	1984	BT REAGENTS
267 SUMMA MEDICAL CORP.	NM	1978	HISTOCHEMICAL MARKERS AND
268 SUNGENE TECHNOLOGIES CORP	CA	1981	PLANT BREEDING
269 SYNBIOTICS CORP.	CA	1982	VET DX;HUMAN DX; VACCINES
270 SYNERGEN, INC.	CO	1980	RESEARCH FOR HUM AND ANIM
271 SYNGENE PRODUCTS	KS	1980	PRODUCTS FOR ANIMALS AND
272 SYNTRO CORP.	CA	1981	ANIMAL VACCINES & DX;ANIM
273 SYVA CO	CA	1966	DX PRODS;TH DRUG MONIT;DR
274 T-CELL SCIENCES	MA	1983	6 MABS; 1 CELLFREE SANDWI
275 TECHNICLONE INTERNATIONAL,	CA	1981	
276 TECHNOMETRICS, INC.	CO	1982	ROTATING DRUM REACTOR-CON
277 THREE-M(3M) DIAGNOSTIC SYST	CA	1981	DIAGNOSTICS
278 TOXICON	MA	1978	TOXICOLOGY SERVICE;REGIST
279 TRANSFORMATION RESEARCH INC	MA	1981	ANTIBODIES
280 TRITON BIOSCIENCES, INC.	CA	1983	REAGENTS FOR CA & HISTOPA
281 UNIGENE LABORATORIES, INC.	NJ	1980	NONE RESEARCH ON PEPTIDE
282 UNITED AGRISEEDS INC	IL	1981	RESEARCH CN PLANTS, SEEDS

COMPANY NAME	STATE	YEAR	PRODUCTS
283 UNITED BIOMEDICAL INC	NY	1984	DIAGNOSTICS, MABS, SPECIA
284 UNITED STATES BIOCHEMICAL C	OH	1973	REAGENTS AND EQUIPMENT
285 UNIVERSITY GENETICS CO.	CT	1981	LICENSES;50 CLON OR CULT
286 UNIVERSITY MICRO REFERENCE	MD	1980	BACTERIAL REFERENCE STRAI
287 VECTOR LABORATORIES, INC.	CA	1976	MOLEC BIOL REAGENTS AND E
288 VEGA BIOTECHNOLOGIES, INC.	AZ	1979	PEPTIDE SYNTESIZERS;REAGE
289 VERAX CORP.	NH	1979	LARGE SCALE CELL CULTURIN
290 VIRAGEN	FL	1980	INTERFERONS, PEPTIDES, ET
291 WESTBRIDGE RESEARCH GROUP	CA	1982	PLANT GRWTH REGULAT;WATER
292 XENOGEN	CT	1981	RDNA RESEARCH FOR DIAGNOS
293 XOMA CORP.	CA	1981	MAB BASED ANTICANCER THER
294 ZOECON CORP.(SANDOZ CROP PR	CA	1968	PLANT IMPROVEMENT AND AG
295 ZYMED LABORATORIES, INC.	CA	1980	IMMUNOCHEMICALS
296 ZYMOGENETICS, INC.	WA	1981	R&D-YEAST, CELLS, FUNGI, HUM

IV-B lists the biotechnology companies in the database, sorted by State. Also shown are the years of founding and some product information data.

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STATE	COMPANY NAME	YEAR	PRODUCTS
AL	SOUTHERN BIOTECH ASSOCIATES	1982	PRODUCE COLLAGEN AND ANTIBODIES TO IT
AR	PEL-FREEZ BIOLOGICALS, INC.	1911	VARIOUS SPECIALTY REAGENTS, MAB SERA, E
AZ	BIO HUMA NETICS	1984	SOIL CONDITIONERS; FEED SUPPLMTS; WASTE
	VEGA BIOTECHNOLOGIES, INC.	1979	PEPTIDE SYNTHESIZERS; REAGENTS; ENZYMES S
CA	ADVANCED GENETIC SCIENCES	1979	RESEARCH FOR AGRI, FROSTBAN, SNOMAX
	ADVANCED GENETICS RES. INST.	1980	VETERINARY VACCINES
	AGOURON INSTITUTE	1979	BASIC RESEARCH IN BIOTECH, NON PROFIT
	AMERICAN BIOGENETICS CORP	1984	PROCESS DESIGN MICROORGANISMS-CHEMICAL
	AMERICAN BIONETICS, INC (ABN)	1981	ORGANIC & BIOCHEM COMPDs
	AMERICAN QUALEX INTL, INC	1981	ANTIBODIES; ENZYMES; DNA-PROBS; INSTURMEN
	AMGEN	1980	RESEARCH REAGENTS EGF, IGF, IFN, ETC.
	ANTIBODIES, INC.	1961	VET DX
	APPLIED BIOSYSTEMS	1981	DNA SYNTHESIZER; PEPTIDE SEQUENCER; REAG
	AUTOMEDIX SCIENCES, INC	1978	NONE AS YET, STAFFING STARTED ON 7/86
	BEHRING DIAGNOSTICS	1952	ANTIBDS; REAGENTS-CALBIOCHEM
	BERKELEY ANTIBODY	1983	DEVELOP CUSTON ANTIBODIES MAB & POLYCL
	BIO-RESPONSE INC.	1972	TPA; MASS CELL CULTURE;
	BIOGENEX LABORATORIES	1981	DIAGN TESTS-RIA; IMM'HIS'CHEM; KITS; REAG
	BIOPROBE INTERNATIONAL, INC.	1983	SPECIALIZED GELS; SEPARATION DEVISE, E
	BIOSEARCH, INC.	1977	REAGENT CHEMICALS AND GENE/PEPTIDE INS
	BIO THERAPY SYSTEMS, INC.	1984	MABS FOR CANCER THERAPY
	BREIT LABORATORIES	1983	MAB BASED DISPOSABLE MEDICAL DIAGNOSTI
	CALGENE, INC.	1980	TOMATOES, COTTON, FOOD PROC.,
	CALIFORNIA BIOTECHNOLOGY INC.	1981	QUESTIONNAIRE STATES ZERO PRODUCTS
	CALIFORNIA INTEGRATED DIAGNOST	1981	MAB TEST KITS FOR DIAG OF SEX TRAN DIS
	CALZYME LABORATORIES, INC.	1983	ENZYMES & BIOCHEMICALS
	CETUS CORPORATION	1971	INTERFERON; INTERLEUKIN-2; MAB; ANTI-NEOP
	CHEMICON INTERNATIONAL, INC	1981	MABS; GRWTH FCTRS; MTT KIT
	CHIRON CORPORATION	1981	DIAGN FOR AIDS; DNA PROBE DIAGN; WOUND H
	CLONTECH LABORATORIES, INC.	1984	CDNA LIBRARIES, REAGENTS, ETC
	CODON	1980	VET VACCINES, HUMAN DIAGNOST,
	COLLAGEN CORPORATION	1975	MEDICAL DEVICES; COLLAGEN IMPLANT; TISS
	COOPER DEVELOPMENT CO.	1980	ALPHA ANTITRYPSIN, DRUGS, MABS, ETC
	CYGNUS RESEARCH CORP.	1985	DRUG DELIV'Y SYST; CONTRACTS TO PHARM C
	CYTOTECH, INC	1982	AIDS DIAGNOSTICS, REAGENTS
	DAKO CORP	1979	POLY AND MONO AB'S, CLIN TEST KITS, PRO
	DIAGNOSTIC PRODUCTS, CORP.	1972	DIAGNOSTIC KITS
	DNAX	1980	RESEARCH SUB OF SP; NO PRODUCTION AT A
	E-Y LABORATORIES, INC	1978	ANTISERA; CARB RECOGN FACTR; REAGENT; DIA
	ENGENICS, INC.	1981	STRAIN PROD'N, SEPARATIONS, PROT. PURIF
	ENZON	1965	SOD FOR HUMAN AND VET USE
	FERMENTEC CORP	1981	WHEY CONVERSION PLANT AND FERMENTATION
	GEN-PROBE, INC.	1984	DNA PROBE TECH FOR RESEARCH & CLINICAL
	GENENCOR, INC.	1982	FOOD PROCESS AND CHEMICAL ENZYMES
	GENENTECH	1976	INSULIN, HGH, TPA, HSA, IF, ENZYMES
	HANA BIOLOGICS, INC.	1979	CELL IMPLANTS TO TREAT DISEASE
	HP GENENCHEM	1983	LAB INSTRUM
	HYBRITECH, INC.	1978	IMMUNOASSAYS; R&D MABS;
	IDEC, INC.		
	IDETEK, INC.	1983	DX TEST KITS FOR FOOD & AGRICULTURE

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STATE	COMPANY NAME	YEAR	PRODUCTS
CA	IMMUNETECH PHARMACEUTICALS	1981	IMMUN ACTIVE PEPTIDES AS THERAPEUTICS
	INFERGENE COMPANY	1983	BAKING & BREWING STRAINS; GLUCAMALYSE S
	INGENE, INC.	1980	BONE & CARTL HEAL; CA THER; SWEETENERS
	INTEK DIAGNOSTICS, INC.	1983	T CELL CLONES, ANTIGENS, FLOW CYTOMETR
	INTELLI-GENETICS	1980	GENETIC ENGIN SOFTWARE; STRATEGENE
	INTERN'TL ENZYMES, INC.	1974	SERUM FREE MEDIA SUPPL; ENZYMES; ANTISER
	INTERN'TL PLANT RESEARCH INST.	1978	DATE PALMS; GEN ENG REAGENTS; OIL PALMS;
	KIRIN-AMGEN	1984	R & D ON ERYTHROPOIETIN
	LEE BIOMOLECULAR RESEARCH LABS	1980	INTERFERONS; ANTI-INTERFERON SERA;
	LIPOSOME TECHNOLOGY	1981	LIPOSOMES FOR PHARM, VET, AG, ETC
	LUCKY BIOTECH CORP.	1984	IFN, HEPATITIS-B DX, PORCINE GH
	MICROBIO RESOURCES	1981	FOOD ADDITIVES & COLORANTS; SPECIAL CHEM
	MICROGENICS	1981	DX ASSAYS; DIGOXIN ASSAY
	MOLECULAR BIOSYSTEMS, INC.	1980	DNA PROBES, AIDS SCREENING TEST
	MONOCLONAL ANTIBODIES, INC.	1979	DIAGNOSTIC TEST KITS
	MULTIPLE PEPTIDE SYSTEMS INC	1986	EQUIP; COMPLETE HF SYSTEMS; BRAIN SLIC
	MYCOGEN	1982	PLANT HERBICIDES BASED ON NAT. PATHOGE
	NEUSHUL MARICULTURE	1978	ANIT-VIRAL; ENZYMES; MOLLUSCAN SEED & CU
	NMS PHARMACEUTICALS	1971	DIAGNOSTICS AND PHARMACEUTICALS
	OCEAN GENETICS	1981	SPEC CHEMS & PHARMACEUT OF MARINE ALGA
	OMNI BIOCHEM, INC.	1986	PEPTIDES; ENZYMES; AMINO ACIDS; REAGENTS.
	PENINSULA LABORATORIES, INC	1971	PEPTIDES, ENZYMES, SPECIALTY REAGENTS
	PHARMATEC, INC	1982	DRUG DEL'Y OF SYNTHETICS THRU BB BARRI
	PHYTOGEN	1980	VECTOR FOR PLANT TRANSFORMATION-PATENT
	PLANT GENETICS, INC.	1981	POTATO TR; HYBRID VEGS
	QUIDEL	1981	DX ASSAYS-PREG, FERT, STREP-A, ALLERY, INF
	RESEARCH&DIAGNOSTIC ANTIBODIES	1985	DIAGNOSTIC KITS, MAB REAGENTS
	SCRIPPS LABORATORIES	1980	BULK HUMAN PROTEINS; HORMONES; ENZYMES
	SIBIA	1981	SALK INSTITUTE'S RESEARCH FIRM
	STRATAGENE CLONING SYSTEMS	1984	BT REAGENTS
	SUNGENE TECHNOLOGIES CORP	1981	PLANT BREEDING
	SYNBIOTICS CORP.	1982	VET DX; HUMAN DX; VACCINES;
	SYNTRO CORP.	1981	ANIMAL VACCINES & DX; ANIMAL HEALTH PRO
	SYVA CO	1966	DX PRODS; TH DRUG MONIT; DRG ABU/TOX; STD
	TECHNICLONE INTERNATIONAL, INC	1981	
	THREE-M(3M) DIAGNOSTIC SYSTEMS	1981	DIAGNOSTICS
	TRITON BIOSCIENCES, INC.	1983	REAGENTS FOR CA & HISTOPATH RES; DX PRO
	VECTOR LABORATORIES, INC.	1976	MOLEC BIOL REAGENTS AND EQUIP.
	WESTBRIDGE RESEARCH GROUP	1982	PLANT GRWTH REGULAT; WATER TREAT'T; ANIM
	XOMA CORP.	1981	MAB BASED ANTICANCER THERAPEUTICS
	ZOECON CORP. (SANDOZ CROP PRO)	1968	PLANT IMPROVEMENT AND AG CHEMICALS
	ZYMED LABORATORIES, INC.	1980	IMMUNOCHEMICALS
CO	ADVANCED MINERAL TECHNOLOGIES	1982	WASTE TREAT & METAL RECOVER
	BIOSTAR MEDICAL PRODUCTS, INC.	1983	DIAGNOSTICS & TEST KITS FOR AUTOIMM.DI
	COORS BIOTECH PRODUCTS CO.	1984	INDUS DEGREASER; FOOD PRODS; SPECIA CH
	GENETIC ENGINEERING, INC.	1980	ANIMAL SEX SELECTION, BULL SEMEN LABS
	SYNERGEN, INC.	1980	RESEARCH FOR HUM AND ANIMAL PHARMACEUT
CT	TECHNOMETRICS, INC.	1982	ROTATING DRUM REACTOR-CONTINUOUS FERME
	AGROTEK	1983	PESTICIDES, NEMATODES
	AMERICAN DIAGNOSTICA, INC.	1983	T-PA ELISA, T-PA ACTIVE ASSAY KITS, ET

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STATE	COMPANY NAME	YEAR	PRODUCTS
CT	BIOPOLYMERS, INC.	1984	CELL & TISSUE ADHESIVE; OPHTHAL ADHESI
	CHIMERIX	1983	CLINICAL TESTING PRODS RESEARCH
	DELTOWN CHEMURGIC CORP.	1968	PEPTONES AND HYDROLASES FOR PHARMA, CHE
	MOLECULAR DIAGNOSTICS, INC.	1980	NONE, LICENSES ALL COMMERCIALIZATION
	UNIVERSITY GENETICS CO.	1981	LICENSES; 50 CLON OR CULT PLANT; CELL&E
DC	XENOGEN	1981	RDNA RESEARCH FOR DIAGNOS AND CHEMICAL
	ALPHA I BIOMEDICALS	1982	PEPTIDES TO PREV, DIAG & TREAT IMMUNEDEF
FL	APPLIED GENETICS LABS. INC.	1984	GENETIC TOX TEST
	DIAMEDIX, INC.	1986	DIAGN KITS FOR INFECT & AUTO IMMUN DIS
	IMMUNOMED	1979	IMMUNOTHERAPEUTICS
	LIFE SCIENCES	1962	APPL RES. ON VIRUSES, ANIMAL STRAINS, IF
	MOLECULAR GENETIC RESOURCES	1983	REV. TRANSCRIPTASE; TERM. TRANSFERASE
	PETROFERM USA	1977	MICROBIALS FOR IMPROVED FUELS
	VIRAGEN	1980	INTERFERONS, PEPTIDES, ETC
GA	BIOSYSTEMS, INC.	1976	GENERAL R AND D MICROBIAL
	MUREX CORP.	1984	MAB REAGENTS & ANTIBODY KITS
HI	HAWAII BIOTECHNOLOGY GROUP, INC	1982	IMMUNOTOXINS, PESTICIDE DETECTION KIT
IA	AMBICO, INC.	1974	VET VACCINES;
IL	BALL BIOTECH COMPANY	1985	PLANT VARIETIES
	DEKALB-PFIZER GENETICS	1982	HYBRID SEEDS, CORN, SOY, ETC.
	INTERN'TL MINERAL & CHEMICAL	1970	ANIMAL GROWTH, HEALTH AND, NUTRITION
	PETROGEN INC.	1980	MICROBES FOR IMPROVED OIL REVOV.
	UNITED AGRISEEDS INC	1981	RESEARCH ON PLANTS, SEEDS, ETC
IN	AGDIA, INC.	1981	PLANT AND FOOD TOX DX FOR VIRUSES
	BIOPRODUCTS FOR SCIENCE, INC.	1985	ANTIBODIES; ANTIGEN MARKERS; REAGENTS
	CONSOLIDATED BIOTECHNOLOGY, INC	1983	ENZYMES, SOME FOOD RELATED RESEARCH
KS	CLINICAL BIOTECHNOLOGIES, INC.	1986	ENZYMES FOR FOOD PRODS, DAIRY, BREWING
	MONOCLONAL PRODUCTION INT'L	1983	MABS FORMED IN SHEEP/COW UTERUS
LA	SYNGENE PRODUCTS	1980	PRODUCTS FOR ANIMALS AND HUMAN HEALTH
	IMREG, INC.	1981	IMMUNOREGULATORS
MA	A/G TECHNOLOGY CORP.	1981	GAS SEPARATION; ULTRA & MICRO FILTRATIO
	ADVANCED MAGNETICS, INC.	1981	DIAG RIA KITS, MAG SEPARATION RGNTS
	ANGENICS	1980	SCREENING TESTS FOR MILK AND DRUG ABUS
	APPLIED BIOTECHNOLOGY	1984	VET VACCINES; HUMAN VACCINES & DX
	APPLIED PROTEIN TECHNOL. INC	1984	INSTRU TO AUTOMAT PEPTIDE & PROTEIN CH
	BIOASSAY SYSTEMS CORP.	1977	ANAL., PURIF, TESTING OF PEPTIDES; DIAG
	BIOGEN	1979	HEPATITIS B CORE ANTIGEN
	BIOMEDICAL TECHNOLOGIES	1981	CELL CULTURE REAGENTS; ANTIBODIES; KIT
	BIOPURE	1984	CUSTOM FERM. OF THERAP, MAB, CHEMICALS
	BIOTECHNICA INTERNATIONAL	1981	DIAG TEST; INNOCULANT, LITE BEER, ETC
	BIOTECHNOLOGY DEVELOPMENT CORP	1982	EQUIPMENT, CONSULTING, REAGENTS
	CAMBRIDGE BIOSCIENCE CORP.	1981	DX KITS FOR AIDS, ADENOVIRUS, ROTAVIRU
	CHARLES RIVER BIOTECH. SERVICES	1983	MABS, CULTURE SYSTEMS
	CHEMGENES	1981	INTERMEDIATES FOR DNA SYNTH
	COLLABORATIVE RESEARCH INC.	1961	RESEARCH REAGENTS, PEPTIDES
	CORNING BIOMEDICAL RESEARCH	1984	HIGH FRUCTOSE CORN SYRUP, FOODS
	CREATIVE BIOMOLECULES	1981	PEPTIDES, CONTRACT R AND D, TPA, EGF,
	DAMON BIOTECH INC.	1978	MABS, DRUG DELIV PRODS, CELL ENCAPSUL.S
	ENZYME CENTER INC., THE	1978	LG SCALE FERMENT; SEPAR & PURIF OF ENZY
	GENETICS INSTITUTE, INC.	1981	GM-CSF; EPO; TPA; GENE SPLIC PRODS

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MA	GENZYME CORP.	1981	BIOLOGICALS FOR HUMAN HEALTH CARE;DIAG
	HYGEIA SCIENCES	1980	OVULATION PREDICTOR; PREGNANCY TEST KI
	IMMUNOGEN, INC.	1981	DEV & MRKT CONJUGATED ABS FOR TU & DX
	IMMUNOTECH CORP.	1980	IMMUNODAGNOSTIC TEST KITS
	INTEGRATED CHEMICAL SENSORS	1984	INSTRUMENTS AND BIOSENSORS
	INTEGRATED GENETICS, INC.	1981	DX DNA PROBES-SALMONELLA, GENETIC DIS
	KARYON TECHNOLOGY, LTD.	1984	TISSUE PROCESS CULTURE TECHNOLOGY
	REPLIGEN CORP.	1981	ENXYMES, PROTEINS,RECOMB PROT A, HTLVI
	SEPRACOR, INC.	1984	MEMBRANE COLUMNS-ANTI-FACTOR 7 &ANTI-T
	SERAGEN, INC	1979	R & D IMMUNOLOGICS,REAGENTS,ANTISERA,E
	SERONO LABS	1971	DRUGS AND DXS IN FERTIL,GRWTH,IMMUN,VI
	T-CELL SCIENCES	1983	6 MABS; 1 CELLFREE SANDWICH ASSAY KIT
	TOXICON	1978	TOXICOLOGY SERVICE;REGISTRATION SUPPOR
	TRANSFORMATION RESEARCH INC.	1981	ANTIBODIES
MD	ADVANCED BIOTECHNOLOGIES	1982	MEDIA, SERA, GROWTH FACTORS
	AMERICAN BIOTECHNOLOGY CO	1984	GROWTH FACTORS
	BIONETICS RESEARCH	1986	CLINICAL DIAGNOSTICS;RESEARCH REAGENTS
	BIOSPHERICS	1967	WASTEWATER PROCESS & MONITORS &PILOT P
	BIOTECH RESEARCH LABS, INC	1973	MABS FOR DIAGNOSTICS, IL-2
	CROP GENETICS INTERNATIONAL,NV	1981	DISEASE FREE SUGARCANE SEED
	DIAGNON CORP.	1981	ASSAYS-FERRITIN,B12/FOLATE,HERPES,VIR
	GENEX INC.	1977	COMMODO AND SPEC. CHEMICALS;DRAIN CLEAN
	GENTRONIX, INC.	1972	BIOCHIPS, BIOELECTRONICS
	IGEN	1982	CONT. RESEARCH; MABS FOR HUMAN PATHOGE
	IGENE BIOTECHNOLOGY INC.	1981	TM-MINRALAC;MACROMIN;WEYCO-SERV;ETC.
	IN VITRO INTERNATIONAL, INC.	1982	TYPE CULTURE DEPOSITORY
	INTER-AMERICAN RESEARCH ASC.	1979	PURIFIED ANTIGENS, ANTISERA, BLOOD PRO
	MICROBIOLOGICAL ASSOCIATES	1947	TOX TESTING FOR GOVT, SOME PROD DEVEL
ME	UNIVERSITY MICRO REFERENCE LAB	1980	BACTERIAL REFERENCE STRAINS
	AGRITECH SYSTEMS, INC	1984	IMMUNOASSAYS
	ATLANTIC ANTIBODIES	1973	IMMUNODX TEST KITS; REAGENTS
	BINAX, INC	1986	MABS, DX TEST KITS,VET DX
	IMMUCELL CORPORATION	1982	2 HUMAN DX;REAGENTS;3 ANIMAL DX;1 VACC
MI	COVALENT TECHNOLOGY CORP.	1981	RAPID DIAGN ASSAY FOR STDs
	NATIONAL GENO SCIENCES	1980	UNKNOWN
	NEOGEN CORP.	1981	FOOD, PLANT HEALTH, ANIMAL HEALTH
	RECOMTEX CORP.	1981	GENETIC DX
MN	ENDOTRONICS, INC.	1981	APS SERIES;ACUSYST-P;VACCINES; BIOLOGI
	GENESIS LABS, INC.	1984	BLOOD GLUCOSE TEST; THERAP DRUG MONITO
	LIFECORE, INC	1975	HYALURONIC ACID, MEDICAL DEVICES
	MOLECULAR GENETICS, INC	1979	AG AND VET PRODS, SCOURS VACCINE;DXS
	PROTATEK INTERNATIONAL, INC.	1985	VIRUS, TEST KITS, SPECIALIZED MICROPE
MO	BIOCLINICAL SYSTEMS,INC		DIAGNOSTICS
	INVITRON CORP.	1984	CONTRACT MANUF OF CELL PRODS-HUMAN TU,
MT	GAMETRICS, LTD.	1974	HUMAN CHILD SEX SELECT, ISOLAT X/Y SPE
	RIBI IMMUNOCHEM RESEARCH, INC.	1981	VET-ANTI-TUMOR PROD;VET DX; VET VACCIN
NC	BIOTHERM	1986	DIAGNOSTICS
	EMBEX, INC.	1985	BIOLOGICALS FOR IN-OVO APPL IN POULTRY
	ENVIRONMENTAL DIAGNOSTICS, INC	1983	ENVIRON AND TOXIN TESTING
	MARICULTURA, INC.	1986	ALGAL PRODS. COSMET;FOOD;CROP STIM;PHA

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STATE	COMPANY NAME	YEAR	PRODUCTS
NC	MYCOSEARCH, INC.	1979	CULTURES OF RARE & NEW FUNGI;LIVE CULT
NE	AMERICAN LABORATORIES, INC	1962	RAW MATERIALS OF BIOTECHNOLOGY PRODUCT
	BIOLOGICS CORP	1966	PSEUDORABIES VACCINE
NH	VERAX CORP.	1979	LARGE SCALE CELL CULTURING PROD MODEL
NJ	AGRI-DIAGNOSTICS ASSOCIATES	1984	TURF & CROP DISEASE DIAGNOSTIC KITS
	ALFACELL CORPORATION	1981	TUMOR TOXINS, REAGENTS, SERA
	BIO-RECOVERY, INC.	1983	MEMBRANE SYSTEMS FOR FILTRATION
	BIOCONSEP, INC.	1983	BIOL SEPARATIONS R AND D AND EQUIP
	BIOMATRIX, INC.	1981	MATERIAL FOR ARTIF ORGANS;COSMET;OPHTH
	BIOTEST DIAGNOSTICS CORP	1946	REAGENTS AND MAB MARKERS
	CHEMICAL DYNAMICS CORP.	1972	DNA TECHNOL REAGENTS, RE'S, ETC.
	CISTRON BIOTECHNOLOGY, INC.	1984	IL-1, IL-2
	CLINICAL SCIENCES, INC.	1971	BIOCHEMICALS FOR DIAGNOS AND VET USES
	CYTOGEN CORP	1980	THERAPEUTIC MABS AND DIAGNOST.
	DNA PLANT TECHNOLOGY CORP.	1981	FOODS AND PLANTS, AGRICULTURAL PRODS
	ELECTRO-NUCLEONICS, INC.	1960	INTERLEUKIN-2;HTLV-III ANTIBODY TEST
	EMTECH RESEARCH	1983	BIOTECH R&D FOR COSMETICS AND AGRICULT
	ENZON, INC.	1981	HUMAN THERAPEUTICS;ENZYMES
	GLEN MILLS, INC.	1980	OEM;CELL LYING EQUIP; GLASS BEADS.
	IMMUNOMEDICS, INC.	1983	AUTOIMM DIS ASSAY;ALLERGY PRODS;TUMOR
	INTER-CELL TECHNOLOGIES, INC.	1982	BIOLOGICALS;IMMUN'REAGENTS;LYMPHOKINES
	INTERFERON SCIENCES, INC.	1981	INTERFERON
	LIPOSOME COMPANY INC.	1981	LIPOSOMES FOR DRUG DELIV AND THERAPEUT
	MARCOR DEVELOPMENT CORP.	1976	REAGENTS FOR FERMENTATION, ENZYMES
	PHARMACIA BIOTECHNOLOGY GROUP	1960	CHROMA SEPARATION CHEMICALS & INSTRUME
	QUEUE SYSTEMS INC	1980	CRYO PRESERVATION;CELL CULTURE;ENVIR S
	SEAPHARM, INC.	1983	MARINE PHARMACEUTICAL PRODS; TISSUE CU
	UNIGENE LABORATORIES, INC.	1980	NONE RESEARCH ON PEPTIDE HORMONES, ENZ
NM	SUMMA MEDICAL CORP.	1978	HISTOCHEMICAL MARKERS AND KITS, CA DX
NY	AN-CON GENETICS	1982	EQUIP;INSTRU
	APPLIED MICROBIOLOGY	1983	HEALTH CARE
	BIONIQUE LABS INC.	1982	CULTUR CHAMBER;MYCOPLASMA DETEC SYST;D
	BIOTECHNOLOGY GENERAL CORP.	1980	SOD, BGH, HGH
	BRAIN RESEARCH INC.	1968	CANCER DIAGNOSTICS
	CHARLES	1982	DIPSTIK DIAGNOS TESTS KITS
	DIAGNOSTIC TECHNOLOGY, INC.	1980	DIAGNOSTICS, BLOOD TEST KITS, REAGENTS
	ENZO BIOCHEM, INC.	1976	ENZYMES;LETINS;FILTERS;NUCLEOTIDES;ETC
	EXOVIR, INC.	1981	TOPICAL FOR HSV-II
	GENETIC DIAGNOSTICS CORP.	1981	DIAGNOSTIC TEST KITS
	INTRA GENE INTERNATIONAL INC.	1981	TECHNOLOGY EXHCANGE;LICENSING
	LIFECODES CORP.	1982	REFERENCE LAB TESTS USING DNA PROBES
	NUCLEAR & GENETIC TECHNOLOGY	1980	RADIOLABELED MABS FOR CANCER DX
	NYGENE CORP.	1985	BIOAFFINITY SEPARAT SYS;HYBRIDOMA PROD
	ONCOGENE SCIENCE, INC	1983	ONCOGENE PROBS FOR DX AND THERAP, MABS
	PRAXIS BIOLOGICS	1983	VACCINES,TEST KITS,THERAPEUTICS
	UNITED BIOMEDICAL INC	1984	DIAGNOSTICS, MABS, SPECIALTY PROTEINS
OH	AGRIGENETICS CORPORATION	1980	SEED AND PLANT GENETICS
	ENZYME TECHNOLOGY CORP.	1981	GLOCOAMYLASE ENZYME; A-AMYLASE ENZYME
	NORTH COAST BIOTECHNOLOGY INC	1986	ENZYMES FOR PHARMACEUTICAL MANUFACTURI
	RICERCA, INC	1986	FERMENTATION AND RESEARCH

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STATE	COMPANY NAME	YEAR	PRODUCTS
OH	UNITED STATES BIOCHEMICAL CORP	1973	REAGENTS AND EQUIPMENT
OR	AMERICAN BIOCLINICAL	1977	REAGENTS;DX KITS;
	ANTIVIRALS, INC	1980	NEU-GENES FOR DIAGN & THERAP USE
	BEND RESEARCH, INCORPORATED	1975	SEPARATION;BIOSENSORS;IMMOBILIZED ENZY
	BENTECH LABORATORIES	1984	YIELD ENHANCING AGENT;ANTIFUNGAL;HEALI
	EPITOPE, INC.	1979	RED CELL & HLA MCS; VIRAL DETEC'N KITS
PA	BIOCHEM TECHNOLOGY INC	1977	COMPUTER PRODS & SOFTWARE; NADH DETECT
	BIOLOGICAL ENERGY CORP.	1981	BIOMASS CONV FOR ALCOHOLS, SUGARS, ETC
	BIOSCIENCE MANAGEMENT INC.	1984	BACTERIAL CULTURES;INNOCULANTS;INSTRUM
	CENTOCOR	1979	DIAGNOSTIC BLOOD TESTS FOR CANCER & HE
	CYTOX CORPORATION	1975	WASTE, AG, POLLUTION, ENERGY
	JACKSON IMMUNORESEARCH LAB	1982	AFFIN PURIF PROTEINS; PURE PROTEINS
RI	SCOTT LABORATORIES	1981	REAGENTS AND SPECIALTY CHEMICALS
SC	AMTRON	1981	ANIMAL DISEASE PREVENTATIVES-PROPIETAR
TN	BIO THERAPEUTICS, INC.	1984	SPECIALTY BIOLOGICAL RESPONSE MODIFIER
TX	BETHYL LABS INC.	1977	ANTISERA & CUSTOM ANTISERA SERVICE
	BIOTICS RESEARCH CORPORATION	1975	NUTRITIONAL SUPPLEMENTS
	GAMMA BIOLOGICALS, INC.	1969	REAGENT-BASED DX TESTS FOR HUMAN BL SE
	GRANADA GENETICS CORP.	1979	BULL GENETICS, SHRIMP, FOOD
	HOUSTON BIOTECH	1984	OPHTHAMOLOGY AND NEUROLOGY PRODUCTS
	IMMUNO MODULATORS LABS. INC	1981	INTERFERONS;AIDS TH;COSMETICS;HCG;ETC.
	KALLESTAD LABORATORIES	1967	DIAGNOSTIC PRODUCTS
	MONOCLONETICS INTERNAT'L, INC.	1984	HUMAN SCREENING TESTS & DIAGN TESTS
	O.C.S. LABS	1984	CUSTOM MADE SYNTHETIC GENES & PEPTIDES
UT	BIOMATERIALS INTERNATIONAL, INC	1981	RAMAN TECH FOR RESPIR APPS; GAS MONITO
	HYCLONE LABORATORIES	1975	IMMUNOCHEM;ANIMAL SERA;HYBRIDOMAS;ETC
	NPI	1973	POTATO & FLOWER SEEDS;SOIL INNOCUL;SEE
VA	FLOW LABORATORIES, INC.	1961	MEDIA, FERMENT EQUIP, REAGENTS
	HAZLETON BIOTECHNOLOGIES GRP	1981	LAB REAGENTS AND EQUIPMENT, MEDIA, MAB
	INTERLEUKIN-2	1983	LYMPHOKINES;AIDS VACCINE;INTERLEUKIN 1
	MELOY LABORATORIES, INC.	1970	SERVICES;REAGENTS; RESEARCH & DEVELOPM
WA	BIO TECHNIQUES LABS., INC.	1982	FEED ADDITIVES;
	BIOCONTROL SYSTEMS	1985	TESTS FOR FOOD WATER ETC, BIOSENSORS
	BIOMED RESEARCH LABS INC	1974	FISH BIOLOGICS, VET
	CYANOTECH CORPORATION	1983	PHYCOBILIPROTEIN;SPIRULINA;B-CAROTENE;
	GENETIC SYSTEMS CORP.	1980	MAB BASED HUMAN DIAGNOST AND THERAPEUT
	IMMUNEX CORP.	1981	IL-2; GM-CSF; IL-1; IL-1BETA;LYMPHOKIN
	IMRE CORP	1981	R & D FOR BLOOD PURIFIERS AND PROTEIN
	NEORX CORP.	1984	MELANOMA IMAGING AGENT-TECHNETIUM
	R & A PLANT/SOIL INC.	1978	ALGAL SOIL CONDITIONERS, FERTILIZERS,E
	ZYMOGENETICS, INC.	1981	R&D-YEAST,CELLS,FUNGI,HUMAN SERA PROTE
WI	AGRACETUS	1981	TERMITICIDE, VACCINES, MICROBIAL INOCU
	BIO-TECHNICAL RESOURCES, INC.	1962	YEAST/BACT PRODS IN FOOD, BREWING,CHEM
	INCELL CORPORATION	1981	PEPTIDE HORMONES;RES-YEAST & FUNGAL GE
	PROMEGA BIOTECH	1978	REAGENTS FOR MOLECULAR BIOLOGY
WV	ALLELIC BIOSYSTEMS	1984	VET TOX TESTS, PROBES, OLIGOS, REAGENT

IV-C lists the biotechnology companies that returned questionnaires. The other categories are the same as in the previous two listings.

	COMPANY NAME	STATE	YEAR	PRODUCTS
1	A/G TECHNOLOGY CORP.	MA	1981	GAS SEPARATION;ULTRA & MI
2	ADVANCED BIOTECHNOLOGIES	MD	1982	MEDIA, SERA, GROWTH FACTO
3	ADVANCED MAGNETICS, INC.	MA	1981	DIAG RIA KITS, MAG SEPARA
4	ADVANCED MINERAL TECHNOLOGI	CO	1982	WASTE TREAT & METAL RECOV
5	AGDIA, INC.	IN	1981	PLANT AND FOOD TOX DX FOR
6	AGRACETUS	WI	1981	TERMITICIDE, VACCINES, MI
7	AGRI-DIAGNOSTICS ASSOCIATES	NJ	1984	TURF & CROP DISEASE DIAGN
8	AGRITECH SYSTEMS, INC	ME	1984	IMMUNOASSAYS
9	ALPHA I BIOMEDICALS	DC	1982	PEPTIDES TO PREV,DIAG &TR
10	AMERICAN BIOGENETICS CORP	CA	1984	PROCESS DESIGN MICROORGAN
11	AMERICAN BIOTECHNOLOGY CO	MD	1984	GROWTH FACTORS
12	AMERICAN DIAGNOSTICA, INC.	CT	1983	T-PA ELISA, T-PA ACTIVE A
13	AMERICAN LABORATORIES, INC	NE	1962	RAW MATERIALS OF BIOTECHN
14	AMGEN	CA	1980	RESEARCH REAGENTS EGF, IG
15	AMTRON	SC	1981	ANIMAL DISEASE PREVENTATI
16	ANGENICS	MA	1980	SCREENING TESTS FOR MILK
17	ANTIVIRALS, INC	OR	1980	NEU-GENES FOR DIAGN & THE
18	APPLIED PROTEIN TECHNOL. IN	MA	1984	INSTRU TO AUTOMAT PEPTIDE
19	AUTOMEDIX SCIENCES, INC	CA	1978	NONE AS YET, STAFFING STA
20	BALL BIOTECH COMPANY	IL	1985	PLANT VARIETIES
21	BENTECH LABORATORIES	OR	1984	YIELD ENHANCING AGENT;ANT
22	BERKELEY ANTIBODY	CA	1983	DEVELOP CUSTON ANTIBODIES
23	BETHYL LABS INC.	TX	1977	ANTISERA & CUSTOM ANTISER
24	BINAX, INC	ME	1986	MABS, DX TEST KITS,VET D
25	BIO-TECHNICAL RESOURCES, IN	WI	1962	YEAST/BACT PRODS IN FOOD,
26	BIOCHEM TECHNOLOGY INC	PA	1977	COMPUTER PRODS & SOFTWARE
27	BIOGEN	MA	1979	HEPATITIS B CORE ANTIGEN
28	BIOGENEX LABORATORIES	CA	1981	DIAGN TESTS=RIA;IMM'HIS'C
29	BIOLOGICS CORP	NE	1966	PSEUDORABIES VACCINE
30	BIOMATERIALS INTERNATIONAL,	UT	1981	RAMAN TECH FOR RESPIR APP
31	BIOMATRIX, INC.	NJ	1981	MATERIAL FOR ARTIF ORGANS
32	BIOMEDICAL TECHNOLOGIES	MA	1981	CELL CULTURE REAGENTS; AN
33	BIONIQUE LABS INC.	NY	1982	CULTUR CHAMBER;MYCOPLASMA
34	BIOPOLYMERS, INC.	CT	1984	CELL & TISSUE ADHESIVE; O
35	BIOPROBE INTERNATIONAL, INC	CA	1983	SPECIALIZED GELS; SEPARAT
36	BIOSCIENCE MANAGEMENT INC.	PA	1984	BACTERIAL CULTURES;INNOCU
37	BIOSPHERICS	MD	1967	WASTEWATER PROCESS & MONI
38	BIOSTAR MEDICAL PRODUCTS, I	CO	1983	DIAGNOSTICS & TEST KITS F
39	BIOTECHNICA INTERNATIONAL	MA	1981	DIAG TEST; INNOCULANT, LI
40	BIOTECHNOLOGY DEVELOPMENT C	MA	1982	EQUIPMENT, CONSULTING,REA
41	BIOTHERAPEUTICS, INC.	TN	1984	SPECIALTY BIOLOGICAL RESP
42	CALGENE, INC.	CA	1980	TOMATOES, COTTON,FOOD PRO
43	CALIFORNIA BIOTECHNOLOGY IN	CA	1981	QUESTIONNAIRE STATES ZERO
44	CALIFORNIA INTEGRATED DIAGN	CA	1981	MAB TEST KITS FOR DIAG OF
45	CALZYME LABORATORIES, INC.	CA	1983	ENZYMES & BIOCHEMICALS
46	CAMBRIDGE BIOSCIENCE CORP.	MA	1981	DX KITS FOR AIDS, ADENIVI
47	CENTOCOR	PA	1979	DIAGNOSTIC BLOOD TESTS FO

	COMPANY NAME	STATE	YEAR	PRODUCTS
48	CETUS CORPORATION	CA	1971	INTERFERON; INTERLEUKIN-2;
49	CHEMICON INTERNATIONAL, INC	CA	1981	MABS; GRWTH FCTRS; MTT KIT
50	CHIRON CORPORATION	CA	1981	DIAGN FOR AIDS; DNA PROBE
51	COLLAGEN CORPORATION	CA	1975	MEDICAL DEVICES; COLLAGEN
52	COORS BIOTECH PRODUCTS CO.	CO	1984	INDUS DEGREASER; FOOD PRO
53	COVALENT TECHNOLOGY CORP.	MI	1981	RAPID DIAGN ASSAY FOR STD
54	CROP GENETICS INTERNATIONAL	MD	1981	DISEASE FREE SUGARCANE SE
55	CYANOTECH CORPORATION	WA	1983	PHYCOBILIPROTEIN; SPIRULIN
56	CYGNUS RESEARCH CORP.	CA	1985	DRUG DELIV'Y SYST; CONTRAC
57	DIAGNON CORP.	MD	1981	ASSAYS-FERRITIN, B12/FOLAT
58	DIAGNOSTIC PRODUCTS, CORP.	CA	1972	DIAGNOSTIC KITS
59	DIAMEDIX, INC.	FL	1986	DIAGN KITS FOR INFECT & A
60	DNAX	CA	1980	RESEARCH SUB OF SP; NO PR
61	E-Y LABORATORIES, INC	CA	1978	ANTISERA; CARB RECOGN FACT
62	ELECTRO-NUCLEONICS, INC.	NJ	1960	INTERLEUKIN-2; HTLV-III AN
63	EMBEX, INC.	NC	1985	BIOLOGICALS FOR IN-OVO AP
64	ENDOTRONICS, INC.	MN	1981	APS SERIES; ACUSYST-P; VACC
65	ENZO BIOCHEM, INC.	NY	1976	ENZYMES; LETINS; FILTERS; NU
66	ENZYME TECHNOLOGY CORP.	OH	1981	GLOCOAMYLASE ENZYME; A-AM
67	EPITOPE, INC.	OR	1979	RED CELL & HLA MCS; VIRAL
68	EXO VIR, INC.	NY	1981	TOPICAL FOR HSV-II
69	GEN-PROBE, INC.	CA	1984	DNA PROBE TECH FOR RESEAR
70	GENENCOR, INC.	CA	1982	FOOD PROCESS AND CHEMICAL
71	GENESIS LABS, INC.	MN	1984	BLOOD GLUCOSE TEST; THERA
72	GENETIC DIAGNOSTICS CORP.	NY	1981	DIAGNOSTIC TEST KITS
73	GENZYME CORP.	MA	1981	BIOLOGICALS FOR HUMAN HEA
74	GLEN MILLS, INC.	NJ	1980	OEM; CELL LYSING EQUIP; GL
75	HP GENENCHEM	CA	1983	LAB INSTRUM
76	HYCLONE LABORATORIES	UT	1975	IMMUNOCHEM; ANIMAL SERA; HY
77	IGENE BIOTECHNOLOGY INC.	MD	1981	TM-MINRALAC; MACROMIN; WEYC
78	IMMUCELL CORPORATION	ME	1982	2 HUMAN DX; REAGENTS; 3 ANI
79	IMMUNEX CORP.	WA	1981	IL-2; GM-CSF; IL-1; IL-1B
80	IMMUNO MODULATORS LABS. INC	TX	1981	INTERFERONS; AIDS TH; COSME
81	IMMUNOMED	FL	1979	IMMUNOTHERAPEUTICS
82	IMMUNOMEDICS, INC.	NJ	1983	AUTOIMM DIS ASSAY; ALLERGY
83	IMMUNOTECH CORP.	MA	1980	IMMUNODIAGNOSTIC TEST KIT
84	INFERGENE COMPANY	CA	1983	BAKING & BREWING STRAINS;
85	INGENE, INC.	CA	1980	BONE & CARTL HEAL; CA THER;
86	INTEGRATED CHEMICAL SENSORS	MA	1984	INSTRUMENTS AND BIOSENSOR
87	INTEGRATED GENETICS, INC.	MA	1981	DX DNA PROBES-SALMONELLA,
88	INTELLI-GENETICS	CA	1980	GENETIC ENGIN SOFTWARE; ST
89	INTER-CELL TECHNOLOGIES, IN	NJ	1982	BIOLOGICALS; IMMUN'REAGENT
90	INTERFERON SCIENCES, INC.	NJ	1981	INTERFERON
91	INTERN'TL PLANT RESEARCH IN	CA	1978	DATE PALMS; GEN ENG REAGEN
92	JACKSON IMMUNORESEARCH LAB	PA	1982	AFFIN PURIF PROTEINS; PUR
93	KALLESTAD LABORATORIES	TX	1967	DIAGNOSTIC PRODUCTS
94	LIFECODES CORP.	NY	1982	REFERENCE LAB TESTS USING

COMPANY NAME	STATE	YEAR	PRODUCTS
95 LUCKY BIOTECH CORP.	CA	1984	IFN, HEPATITIS-B DX,PORCI
96 MARICULTURA, INC.	NC	1986	ALGAL PRODS. COSMET;FOOD;
97 MELOY LABORATORIES, INC.	VA	1970	SERVICES;REAGENTS; RESEAR
98 MICROBIO RESOURCES	CA	1981	FOOD ADDITIVES & COLORANT
99 MICROGENICS	CA	1981	DX ASSAYS; DIGOXIN ASSAY
100 MOLECULAR DIAGNOSTICS, INC.	CT	1980	NONE, LICENSES ALL COMMER
101 MOLECULAR GENETIC RESOURCES	FL	1983	REV.TRANSCRIPTASE;TERM.TR
102 MOLECULAR GENETICS, INC	MN	1979	AG AND VET PRODS, SCOURS
103 MONOCLONAL ANTIBODIES, INC.	CA	1979	DIAGNOSTIC TEST KITS
104 MONOCLONETICS INTERNAT'L, I	TX	1984	HUMAN SCREENING TESTS & D
105 MULTIPLE PEPTIDE SYSTEMS IN	CA	1986	EQUIP; COMPLETE HF SYSTEM
106 MUREX CORP.	GA	1984	MAB REAGENTS & ANTIBODY K
107 MYCOSEARCH, INC.	NC	1979	CULTURES OF RARE & NEW FU
108 NEORX CORP.	WA	1984	MELANOMA IMAGING AGENT-TE
109 NEUSHUL MARICULTURE	CA	1978	ANIT-VIRAL;ENZYMES;MOLLUS
110 NORTH COAST BIOTECHNOLOGY I	OH	1986	ENZYMES FOR PHARMACEUTICA
111 NPI	UT	1973	POTATO & FLOWER SEEDS;SOI
112 NYGENE CORP.	NY	1985	BIOAFFINITY SEPARAT SYS;H
113 PHARMATEC, INC	CA	1982	DRUG DEL'Y OF SYNTHETICS
114 PHYTOGEN	CA	1980	VECTOR FOR PLANT TRANSFOR
115 PLANT GENETICS, INC.	CA	1981	POTATO TR;HYBRID VEGS
116 QUEUE SYSTEMS INC	NJ	1980	CRYO PRESERVATION;CELL CU
117 QUIDEL	CA	1981	DX ASSAYS-PREG,FERT,STREP
118 R & A PLANT/SOIL INC.	WA	1978	ALGAL SOIL CONDITIONERS,
119 RECOMTEX CORP.	MI	1981	GENETIC DX
120 RIBI IMMUNOCHEM RESEARCH, I	MT	1981	VET-ANTI-TUMOR PROD;VET D
121 RICERCA, INC	OH	1986	FERMENTATION AND RESEARCH
122 SEPRACOR, INC.	MA	1984	MEMBRANE COLUMNS-ANTI-FAC
123 STRATAGENE CLONING SYSTEMS	CA	1984	BT REAGENTS
124 SYNBIOTICS CORP.	CA	1982	VET DX;HUMAN DX; VACCINES
125 SYNTRO CORP.	CA	1981	ANIMAL VACCINES & DX;ANIM
126 SYVA CO	CA	1966	DX PRODS;TH DRUG MONIT;DR
127 T-CELL SCIENCES	MA	1983	6 MABS; 1 CELLFREE SANDWI
128 TRANSFORMATION RESEARCH INC	MA	1981	ANTIBODIES
129 TRITON BIOSCIENCES, INC.	CA	1983	REAGENTS FOR CA & HISTOPA
130 UNIGENE LABORATORIES, INC.	NJ	1980	NONE RESEARCH ON PEPTIDE
131 UNITED AGRISEEDS INC	IL	1981	RESEARCH ON PLANTS, SEEDS
132 UNIVERSITY GENETICS CO.	CT	1981	LICENSES;50 CLON OR CULT
133 VERAX CORP.	NH	1979	LARGE SCALE CELL CULTURIN
134 WESTBRIDGE RESEARCH GROUP	CA	1982	PLANT GRWTH REGULAT;WATER
135 ZOECON CORP. (SANDOZ CROP PR	CA	1968	PLANT IMPROVEMENT AND AG
136 ZYMED LABORATORIES, INC.	CA	1980	IMMUNOCHEMICALS
137 ZYMOGENETICS, INC.	WA	1981	R&D-YEAST, CELLS, FUNGI, HUM

IV-D lists biotechnology companies in the database that have not returned questionnaires. A few of these companies did send a letter with a non-completed questionnaire, but the majority did not respond at all. All but four companies had originally agreed to help with the project. The field with "DN" or "N" next to the company name is coded as follows: N=No questionnaire returned; D=Directories used as primary source of information; Z=Sent refusal letter. It should be noted that refusals were for various reasons— a few companies felt they were too small to give out the proprietary information, for example.

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COMPANIES WITH NO QUESTIONNAIRE DATA IN THE DATABASE

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COMPANY NAME/SOURCE OF INFORMATION			COMPANY NAME/SOURCE OF INFORMATION		
1	ADVANCED GENETIC SCIENCES	DN	2	ADVANCED GENETICS RES. INST.	DN
3	AGOURON INSTITUTE	DN	4	AGRIGENETICS CORPORATION	DN
5	AGROTEK	DN	6	ALFACELL CORPORATION	DN
7	ALLELIC BIOSYSTEMS	DN	8	AMBICO, INC.	DN
9	AMERICAN BIOCLINICAL	DPN	10	AMERICAN BIONETICS, INC (ABN)	DN
11	AMERICAN QUALEX INTL, INC	DN	12	AN-CON GENETICS	DN
13	ANTIBODIES, INC.	DN	14	APPLIED BIOSYSTEMS	DN
15	APPLIED BIOTECHNOLOGY	DN	16	APPLIED GENETICS LABS. INC.	DN
17	APPLIED MICROBIOLOGY	DN	18	ATLANTIC ANTIBODIES	DN
19	BEHRING DIAGNOSTICS	DN	20	BEND RESEARCH, INCORPORATED	DN
21	BIO HUMA NETICS	DN	22	BIO TECHNIQUES LABS., INC.	DN
23	BIO-RECOVERY, INC.	DZP	24	BIO-RESPONSE INC.	LZ
25	BIOASSAY SYSTEMS CORP.	DN	26	BIOCLINICAL SYSTEMS, INC	N
27	BIOCONSEP, INC.	DN	28	BIOCONTROL SYSTEMS	DPN
29	BIOLOGICAL ENERGY CORP.	DN	30	BIOMED RESEARCH LABS INC	DN
31	BIONETICS RESEARCH	PN	32	BIOPRODUCTS FOR SCIENCE, INC.	DPN
33	BIOPURE	DN	34	BIOSEARCH, INC.	DN
35	BIOSYSTEMS, INC.	DN	36	BIOTECH RESEARCH LABS, INC	DN
37	BIOTECHNOLOGY GENERAL CORP.	LDN	38	BIOTEST DIAGNOSTICS CORP	DN
39	BIO THERAPY SYSTEMS, INC.	DN	40	BIO THERM	N
41	BIOTICS RESEARCH CORPORATION	PZ	42	BRAIN RESEARCH INC.	DN
43	BREIT LABORATORIES	DN	44	CHARLES	DN
45	CHARLES RIVER BIOTECH.SERVICES	N	46	CHEMGENES	DN
47	CHEMICAL DYNAMICS CORP.	N	48	CHIMERIX	DN
49	CISTRON BIOTECHNOLOGY, INC.	DN	50	CODON	DN
51	COLLABORATIVE RESEARCH INC.	DN	52	CONSOLIDATED BIOTECHNOLOGY, INC	N
53	COOPER DEVELOPMENT CO.	LDN	54	CORNING BIOMEDICAL RESEARCH	DN
55	CREATIVE BIOMOLECULES	DN	56	CYTOGEN CORP	LN
57	CYTOTECH, INC	DN	58	CYTOX CORPORATION	DN
59	DAKO CORP	DN	60	DAMON BIOTECH INC.	DN
61	DEKALB-PFIZER GENETICS	DN	62	DELTOWN CHEMURGIC CORP.	DPN
63	DIAGNOSTIC TECHNOLOGY, INC.	DN	64	DNA PLANT TECHNOLOGY CORP.	LDN
65	EMTECH RESEARCH	N	66	ENGENICS, INC.	DN
67	ENVIRONMENTAL DIAGNOSTICS, INC	DN	68	ENZON	DN
69	ENZYME CENTER INC., THE	DPN	70	FERMENTEC CORP	N
71	FLOW LABORATORIES, INC.	DN	72	GAMETRICS, LTD.	ZD
73	GAMMA BIOLOGICALS, INC.	DN	74	GENENTECH	DN
75	GENETIC ENGINEERING, INC.	DN	76	GENETIC SYSTEMS CORP.	DN
77	GENETICS INSTITUTE, INC.	DN	78	GENEX INC.	DN
79	GENTRONIX, INC.	DN	80	GRANADA GENETICS CORP.	LDZ
81	HANA BIOLOGICS, INC.	DN	82	HAWAII BIOTECHNOLOGY GROUP, INC	DN
83	HAZLETON BIOTECHNOLOGIES GRP	DN	84	HOUSTON BIOTECH	DN
85	HYBRITECH, INC.	DN	86	HYGEIA SCIENCES	DN
87	IDEC, INC.	DPZ	88	IDETEK, INC.	DN
89	IGEN	DN	90	IMMUNETECH PHARMACEUTICALS	DN
91	IMMUNOGEN, INC.	DN	92	IMRE CORP	DN
93	IMREG, INC.	LN	94	IN VITRO INTERNATIONAL, INC.	DN

NCBC BIOTECHNOLOGY COMPANIES DATABASE

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COMPANIES WITH NO QUESTIONNAIRE DATA IN THE DATABASE

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COMPANY NAME/SOURCE OF INFORMATION		COMPANY NAME/SOURCE OF INFORMATION		
95	INCELL CORPORATION	DPN	96 INTEK DIAGNOSTICS, INC.	DN
97	INTER-AMERICAN RESEARCH ASC.	PN	98 INTERLEUKIN-2	DPN
99	INTERN'TL ENZYMES, INC.	DPN	100 INTERN'TL MINERAL & CHEMICAL	DPN
101	INTRA GENE INTERNATIONAL INC.	DPN	102 INVITRON CORP.	DPN
103	KARYON TECHNOLOGY, LTD.	DN	104 KIRIN-AMGEN	DPN
105	LEE BIOMOLECULAR RESEARCH LABS	DN	106 LIFE SCIENCES	DN
107	LIFECORE, INC	DN	108 LIPOSOME COMPANY INC.	DN
109	LIPOSOME TECHNOLOGY	DN	110 MARCOR DEVELOPMENT CORP.	DN
111	MICROBIOLOGICAL ASSOCIATES	DN	112 MOLECULAR BIOSYSTEMS, INC.	DN
113	MONOCLONAL PRODUCTION INT'L	DN	114 MYCOGEN	DN
115	NATIONAL GENO SCIENCES	N	116 NEOGEN CORP.	DN
117	NMS PHARMACEUTICALS	DPN	118 NUCLEAR & GENETIC TECHNOLOGY	DN
119	O.C.S. LABS	DPN	120 OCEAN GENETICS	DN
121	OMNI BIOCHEM, INC.	DPN	122 ONCOGENE SCIENCE, INC	DN
123	PEL-FREEZ BIOLOGICALS, INC.	DN	124 PENINSULA LABORATORIES, INC	DN
125	PETROFERM USA	DN	126 PETROGEN INC.	DN
127	PHARMACIA BIOTECHNOLOGY GROUP	DN	128 PRAXIS BIOLOGICS	Z
129	PROMEGA BIOTECH	DN	130 PROTATEK INTERNATIONAL, INC.	DN
131	REPLIGEN CORP.	DN	132 RESEARCH&DIAGNOSTIC ANTIBODIES	DN
133	SCOTT LABORATORIES	DN	134 SCRIPPS LABORATORIES	DPN
135	SEAPHARM, INC.	DN	136 SERAGEN, INC	DN
137	SERONO LABS	DN	138 SIBIA	ZL
139	SOUTHERN BIOTECH ASSOCIATES	DN	140 SUMMA MEDICAL CORP.	DN
141	SUNGENE TECHNOLOGIES CORP	DN	142 SYNERGEN, INC.	DN
143	SYNGENE PRODUCTS	Z	144 TECHNICLONE INTERNATIONAL, INC	DN
145	TECHNOMETRICS, INC.	DN	146 THREE-M(3M) DIAGNOSTIC SYSTEMS	PN
147	TOXICON	PN	148 UNITED BIOMEDICAL INC	DN
149	UNITED STATES BIOCHEMICAL CORP	DN	150 UNIVERSITY MICRO REFERENCE LAB	DN
151	VECTOR LABORATORIES, INC.	DN	152 VEGA BIOTECHNOLOGIES, INC.	DN
153	VIRAGEN	DN	154 XENOGEN	DN
155	XOMA CORP.	DN		

IV-E lists major American corporations with major interests in biotechnology. Also given are the primary and secondary biotechnology-related interests of the company (see Section VII-A for a table of classifications) and some product information.

NCBC BUSINESS STUDIES PROGRAM-COMPANIES DATABASE
BIOTECHNOLOGY COMPANIES SORTED BY SIZE
CORPORATIONS (OVER 1000 EMPLOYEES)

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	COMPANY NAME	BIOTECHNOLOGY		PRODUCTS
		PRI	SEC	
1	ABBOTT LABORATORIES	P	OEHK	DIAGNOSTIC;ENZYME;INSECTIDICE;LAB PRODS
2	ALPHA THERAPEUTIC CORP.	P	S	VACCINES
3	AMERICAN CYANAMID	P	QVK	VET AND HUMAN DIAGNOSTICS
4	AMERICAN HOME PRODUCTS CORP.	P		CV AND DIURETIC AGENTS;
5	AMERICAN HOSPITAL SUPPLY CORP.	K	F	DIAGNOSTIC LAB SYSTEMS;MED/SURG DEVICES;
6	AMOCO CORP.	K		FODD DX;SOFTWARE
7	ARES-SERONO LABORATORIES	P	K	INFERTILITY PRODS FROM NATURAL SUBSTANCE
8	ATLANTIC RICHFIELD	B	LBJ	MUTANT BACTERIA;HYBRID SEEDS;CHEMICALS
9	BAXTER-TRAVENOL	P	K	FACTOR VIII;AIDS DX;MABS;TPA
10	BECTON DICKINSON & CO.	W	GPX	FACS;MABS;DIAGNOSTICS;INSTRUMENTATION;
11	BECTON DICKINSON IMMUNOCYTOMET	X	K	MABS;CELL SORTER REAGENTS
12	BIO-RAD LABORATORIES	F	G	ELECTROPHORESIS & CHROMATOGRAPHIC PRODS
13	BOEHRINGER MANNHEIM BIOCHEM CP	G		MOLECULAR BIOLOGY PRODS;MABS;ANTIBODIES;
14	BRISTOL-MYERS CO,BT CENTER	P	KVW	INTERFERONS;ANTIBIOTICS
15	CELANESE CORP	J	ERI	RESEARCH ON MICROORGANISMS AS CATALYSTS
16	CORNING GLASS WORKS			IMMOBILIZED ENZYMES;RIA FOR DX KITS;
17	DOW CHEMICAL CO.	W	XBG	MOLECULAR BIOLOGY;IMMUNOLOGY;SEEDS
18	DU PONT DE NEMOURS & CO, E I	F	PBOK	EQUIPMENT;DNA PROBES;CELL CULTURE PRODS
19	EASTMAN-KODAK	A	VP	ANIMAL NUTRITION;AGRICUL TECHNOL
20	FLUOR CORP	M	OPB	CONSTRUCTION OF BT FACILITIES
21	GELMAN SCIENCES	E	FG	EQUIPMENT FOR BIOSEPARATIONS, MEDIA
22	GRACE, W.R. & CO.CORP CENTER	A	BGQV	ENZYMES;AMINO ACIDS;SEEDS;VACCINES
23	HOFFMAN-LA ROCHE, INC.	P		INTERFERON ALPHA-2A;INTERLEUKIN-2
24	INTERN'TL MINERAL & CHEMICAL	A	MV	ANIMAL GROWTH, HEALTH AND, NUTRITION
25	JOHNSON & JOHNSON	P	KGX	DIAGNOSTICS;MABS;IMMUNO TECHNOLOGY;
26	KEY PHARMACEUTICALS	P	W	DRUG DELIVERY OPTIMIZATION;
27	LEDERLE LABORATORIES	P	Q	ANTIBIOS;VACCINES;VITAMINS;ANTI-FUNGALS
28	LIFE TECHNOLOGIES, INC.	K	G	PROBE ASSAYS FOR HUMAN DISEASE--OTH.REAG
29	LILLY, ELI & CO.	P	OKA	HGH;PROINSULIN;ANTIBIOTICS;DIAGNOSTICS
30	LITTON BIONETICS, INC.	W	KG	CLINICAL DIAGNOSTICS;RESEARCH REAGENTS;
31	LUBRIZOL ENTERPRISES, INC.	B	J	VENTURE DEVELOPMENT CO;RAW MATERIALS
32	MARTIN MARIETTA,BIOSCIENCES-	W	T	CHEMICAL PROD FROM ALGAE-NASA CONTRACT
33	MERCK & COMPANY, INC.	P	VQP	BIOPOLYMERS;ANTIBIOTICS;VITAMINS;GF;ETC.
34	MILES LABS,INC.BIOTECH GROUP	O	KPLM	ENZYMES;CITRIC ACID;MARZYME CULTURES;ETC
35	MONSANTO CORP.	M		ASPARTAME
36	NATIONAL DISTILLERS & CHEM CRP	L	KOM	ALCOHOL;SPIRITS;WINE;CHEMICALS;PROPANE
37	NOVA PHARMACEUTICAL CO	P		RECEPTOR TARGETED DRUGS;DX KITS;
38	NUTRISEARCH INTERN'T'L CORP	M		BAKER'S YEAST;HYDROLYZED LACTOSE;WHEY,ET
39	PFIZER, INC.	P	VABO	SORBOSE;XANTHAN;ANTIBIOTICS;TETRACYCLINE
40	PHARMACIA BIOTECHNOLOGY GROUP	E	GVA	CHROMA SEPARATION CHEMICALS & INSTRUMENT
41	PHILLIPS PETROLEUM COMPANY	O	JG	SINGLE-CELL PROTEIN;ENZYMES;AGRICULT PRO
42	PROCTOR & GAMBLE	P	K	DRUG DELIVERY SYSTEMS FOR DX OR TU
43	ROHM & HAAS COMPANY	B	WJ	HYBRID SEED TECH;PLANT SCIENCE RESEARCH
44	RORER CENTER RESEARCH (MELOY)	P		PHARMACEUTICALS
45	SANDOZ PHARMACUETICAL CORP.	P		BIOLOGICAL INSECTICIDE;CORN HYBRIDS;KPA

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 BIOTECHNOLOGY COMPANIES SORTED BY SIZE
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COMPANY NAME	BIOTECHNOLOGY		PRODUCTS
	PRI	SEC	
46 SCHERING-PLOUGH CORPORATION	P	WV	ALPHA-2 INTERFERON;
47 SEARLE, G.D. & CO.	P	M	TPA; ATRIAL PEPTIDES; INTERFERONS
48 SHELL OIL CO.	K	PG	
49 SMITHKLINE BECKMAN CORP	P	QVFW	VACCINES; TPA;
50 SQUIBB, E.R. & SONS, INC.	P	O	STEROID OXIDATIONS; ANTIBIOS; MONOBACTAMS
51 SYNTEX CORP.	K	AVP	HEALTH PRODUCTS; DNA RESEARCH; NEOPL DX
52 TECH AMERICA GROUP	V		VETERINARY PRODUCTS
53 TRAVENOL LABORATORIES, INC.	W	GKX	TISSUE CULTURE SCALE-UP PROC-MAMM CELL L
54 UPJOHN COMPANY	P	BVA	ANTIBIOTICS; TETRACYCLINE; SEEDS; BGH
55 WEYERHAEUSER CO.	B	C	TISSUE CULTURE OF FLOWERS AND PLANTS
56 WYETH LABORATORIES	P	Q	PHARMACEUTICALS; VIRAL & BACTERIAL VACCIN

IV-F lists companies that are subsidiaries of other companies. Of the 37, eight are subsidiaries of foreign firms.

NCBC BUSINESS STUDIES PROGRAM - COMPANIES DATABASE
BIOTECHNOLOGY COMPANIES SORTED BY FINANCING
SUBSIDIARY COMPANIES

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	COMPANY NAME	FINANCING	SIZE/TYPE	PERSONNEL
1	ADVANCED GENETICS RES. INST.	SUB	MU	25
2	AGRIGENETICS CORPORATION	SUB	MU	
3	AGROTEK	SUB	MU	
4	AN-CON GENETICS	SUB	SU	3
5	ATLANTIC ANTIBODIES	SUB	MU	60
6	BEHRING DIAGNOSTICS	SUB	LU	
7	BIOASSAY SYSTEMS CORP.	SUB	MU	65
8	BIOCLINICAL SYSTEMS, INC	SUB	SU	
9	BIOLOGICS CORP	SUB	MU	85
10	BIOSEARCH, INC.	SUB	MU	
11	BIOTEST DIAGNOSTICS CORP	SUB	SU	
12	CALIFORNIA INTEGRATED DIAGNOST	SUB	SU	17
13	CHARLES RIVER BIOTECH.SERVICES	SUB	MU	
14	COOPER DEVELOPMENT CO.	SUB	LU	
15	COORS BIOTECH PRODUCTS CO.	SUB	LU	185
16	CORNING BIOMEDICAL RESEARCH	SUB	MU	
17	COVALENT TECHNOLOGY CORP.	SUB	SU	16
18	DAKO CORP	SUB	U	
19	DAMON BIOTECH INC.	SUB	LU	126
20	ENZYME TECHNOLOGY CORP.	SUB	MU	26
21	FLOW LABORATORIES, INC.	SUB	LU	
22	GENETIC SYSTEMS CORP.	SUB	LU	400
23	GRANADA GENETICS CORP.	SUB	SU	3
24	HAZLETON BIOTECHNOLOGIES GRP	SUB	LU	500
25	HYBRITECH, INC.	SUB	LU	
26	LUCKY BIOTECH CORP.	SUB	SU	4
27	MELOY LABORATORIES, INC.	SUB	LU	246
28	MOLECULAR DIAGNOSTICS, INC.	SUB	MU	30
29	PHARMACIA BIOTECHNOLOGY GROUP	SUB	CU	
30	RICERCA, INC	SUB	LU	160
31	SCOTT LABORATORIES	SUB	LU	375
32	SERAGEN, INC	SUB	LU	250
33	SYNGENE PRODUCTS	SUB	SU	20
34	SYVA CO	SUB	LU	1000
35	THREE-M(3M) DIAGNOSTIC SYSTEMS	SUB	LU	130
36	TRITON BIOSCIENCES, INC.	SUB	LU	140
37	ZOECON CORP.(SANDOZ CROP PRO)	SUB	LU	130

IV-G lists companies that were formed by joint venture.

NCBC BUSINESS STUDIES PROGRAM - COMPANIES DATABASE
BIOTECHNOLOGY COMPANIES SORTED BY FINANCING
JOINT VENTURES

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	COMPANY NAME	FINANCING	SIZE/TYPE	PERSONNEL
1	AGRACETUS	PRI	MJV	65
2	AGRI-DIAGNOSTICS ASSOCIATES	PRI	SJ	22
3	CORNING BIOMEDICAL RESEARCH	SUB	MU	
4	DEKALB-PFIZER GENETICS	PRI	LJV	235
5	GENENCOR, INC.	PRI	MJV	100
6	HP GENENCHEM	PRI	MJ	
7	IN VITRO INTERNATIONAL, INC.	PRI	JV	
8	KIRIN-AMGEN	PRI	MJV	

IV-H lists all biotechnology companies in the database, sorted by year of founding. Twenty of the 296 were founded before 1971, but these turned their focus to biotechnology in the mid- 1970's.

NCBC BUSINESS STUDIES PROGRAM--COMPANIES DATABASE
BIOTECHNOLOGY COMPANIES BY YEAR OF FOUNDING
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YEAR	COMPANY NAME
1911	PEL-FREEZ BIOLOGICALS, INC.
1946	BIOTEST DIAGNOSTICS CORP
1947	MICROBIOLOGICAL ASSOCIATES
1952	BEHRING DIAGNOSTICS
1960	ELECTRO-NUCLEONICS, INC. PHARMACIA BIOTECHNOLOGY GROUP
1961	ANTIBODIES, INC. FLOW LABORATORIES, INC. COLLABORATIVE RESEARCH INC.
1962	LIFE SCIENCES BIO-TECHNICAL RESOURCES, INC. AMERICAN LABORATORIES, INC
1965	ENZON
1966	BIOLOGICS CORP SYVA CO
1967	KALLESTAD LABORATORIES BIOSPHERICS
1968	DELTOWN CHEMURGIC CORP. ZOECON CORP. (SANDOZ CROP PRO) BRAIN RESEARCH INC.
1969	GAMMA BIOLOGICALS, INC.
1970	MELOY LABORATORIES, INC. INTERN'TL MINERAL & CHEMICAL
1971	CETUS CORPORATION SERONO LABS PENINSULA LABORATORIES, INC CLINICAL SCIENCES, INC. NMS PHARMACEUTICALS
1972	GENTRONIX, INC. BIO-RESPONSE INC. CHEMICAL DYNAMICS CORP. DIAGNOSTIC PRODUCTS, CORP.
1973	BIOTECH RESEARCH LABS, INC UNITED STATES BIOCHEMICAL CORP ATLANTIC ANTIBODIES NPI
1974	GAMETRICS, LTD. AMBICO, INC. BIOMED RESEARCH LABS INC INTERN'TL ENZYMES, INC.
1975	LIFECORE, INC BEND RESEARCH, INCORPORATED BIOTICS RESEARCH CORPORATION CYTOX CORPORATION HYCLONE LABORATORIES COLLAGEN CORPORATION
1976	VECTOR LABORATORIES, INC. BIOSYSTEMS, INC. ENZO BIOCHEM, INC.

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BIOTECHNOLOGY COMPANIES BY YEAR OF FOUNDING
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YEAR	COMPANY NAME
1976	GENENTECH
	MARCOR DEVELOPMENT CORP.
1977	GENEX INC.
	BIOSEARCH, INC.
	BIOASSAY SYSTEMS CORP.
	BIOCHEM TECHNOLOGY INC
	BETHYL LABS INC.
	AMERICAN BIOCLINICAL
	PETROFERM USA
1978	E-Y LABORATORIES, INC
	DAMON BIOTECH INC.
	HYBRITECH, INC.
	INTERN'TL PLANT RESEARCH INST.
	PROMEGA BIOTECH
	SUMMA MEDICAL CORP.
	R & A PLANT/SOIL INC.
	ENZYME CENTER INC., THE
	NEUSHUL MARICULTURE
	TOXICON
	AUTOMEDIX SCIENCES, INC
1979	HANA BIOLOGICS, INC.
	INTER-AMERICAN RESEARCH ASC.
	IMMUNOMED
	GRANADA GENETICS CORP.
	VEGA BIOTECHNOLOGIES, INC.
	CENTOCOR
	MONOCLONAL ANTIBODIES, INC.
	MYCOSEARCH, INC.
	VERAX CORP.
	ADVANCED GENETIC SCIENCES
	SERAGEN, INC
	BIOGEN
	AGOURON INSTITUTE
	DAKO CORP
	EPITOPE, INC.
	MOLECULAR GENETICS, INC
1980	LEE BIOMOLECULAR RESEARCH LABS
	QUEUE SYSTEMS INC
	AGRIGENETICS CORPORATION
	INGENE, INC.
	DNAX
	NUCLEAR & GENETIC TECHNOLOGY
	VIRAGEN
	DIAGNOSTIC TECHNOLOGY, INC.
	AMGEN
	PETROGEN INC.
	CALGENE, INC.
	PHYTOGEN
	BIOTECHNOLOGY GENERAL CORP.

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BIOTECHNOLOGY COMPANIES BY YEAR OF FOUNDING
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YEAR	COMPANY NAME
1980	MOLECULAR BIOSYSTEMS, INC. SYNERGEN, INC. INTELLI-GENETICS UNIGENE LABORATORIES, INC. UNIVERSITY MICRO REFERENCE LAB CYTOGEN CORP ZYMED LABORATORIES, INC. MOLECULAR DIAGNOSTICS, INC. SYNGENE PRODUCTS ANGENICS NATIONAL GENO SCIENCES CODON ANTIVIRALS, INC HYGEIA SCIENCES SCRIPPS LABORATORIES GLEN MILLS, INC. COOPER DEVELOPMENT CO. GENETIC SYSTEMS CORP. GENETIC ENGINEERING, INC. IMMUNOTECH CORP. ADVANCED GENETICS RES. INST.
1981	BIOLOGICAL ENERGY CORP. BIOMATERIALS INTERNATIONAL, INC A/G TECHNOLOGY CORP. BIOMATRIX, INC. INCELL CORPORATION BIOGENEX LABORATORIES OCEAN GENETICS INTRA GENE INTERNATIONAL INC. SIBIA AMTRON CHEMICON INTERNATIONAL, INC AGDIA, INC. FERMENTEC CORP AGRACETUS ADVANCED MAGNETICS, INC. AMERICAN QUALEX INTL, INC GENZYME CORP. LIPOSOME TECHNOLOGY MICROBIO RESOURCES IMMUNETECH PHARMACEUTICALS CHEMGENES IMMUNOGEN, INC. APPLIED BIOSYSTEMS CHIRON CORPORATION LIPOSOME COMPANY INC. IMMUNO MODULATORS LABS. INC SCOTT LABORATORIES MICROGENICS

NCBC BUSINESS STUDIES PROGRAM--COMPANIES DATABASE
BIOTECHNOLOGY COMPANIES BY YEAR OF FOUNDING
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YEAR	COMPANY NAME
1981	IMRE CORP BIOMEDICAL TECHNOLOGIES TRANSFORMATION RESEARCH INC. UNITED AGRISEEDS INC NEOGEN CORP. CAMBRIDGE BIOSCIENCE CORP. XENOGEN XOMA CORP. THREE-M(3M) DIAGNOSTIC SYSTEMS INTERFERON SCIENCES, INC. INTEGRATED GENETICS, INC. IMREG, INC. SYNTRO CORP. IMMUNEX CORP. IGENE BIOTECHNOLOGY INC. CALIFORNIA INTEGRATED DIAGNOST DIAGNON CORP. DNA PLANT TECHNOLOGY CORP. ENDOTRONICS, INC. ENGENICS, INC. CROP GENETICS INTERNATIONAL, NV ENZON, INC. ENZYME TECHNOLOGY CORP. EXO VIR, INC. CREATIVE BIOMOLECULES COVALENT TECHNOLOGY CORP. GENETIC DIAGNOSTICS CORP. GENETICS INSTITUTE, INC. HAZLETON BIOTECHNOLOGIES GRP TECHNICLONE INTERNATIONAL, INC RIBI IMMUNOCHEM RESEARCH, INC. REPLIGEN CORP. SUNGENE TECHNOLOGIES CORP RECOMTEX CORP. BIOTECHNICA INTERNATIONAL QUIDEL UNIVERSITY GENETICS CO. ZYMOGENETICS, INC. ALFACELL CORPORATION CALIFORNIA BIOTECHNOLOGY INC. PLANT GENETICS, INC. AMERICAN BIONETICS, INC (ABN) 1982 ADVANCED MINERAL TECHNOLOGIES AN-CON GENETICS BIONIQUE LABS INC. TECHNOMETRICS, INC. SYNBIOTICS CORP. GENENCOR, INC. SOUTHERN BIOTECH ASSOCIATES

YEAR	COMPANY NAME
1982	BIOTECHNOLOGY DEVELOPMENT CORP MYCOGEN ALPHA I BIOMEDICALS HAWAII BIOTECHNOLOGY GROUP, INC DEKALB-PFIZER GENETICS CYTOTECH, INC WESTBRIDGE RESEARCH GROUP CHARLES LIFECODES CORP. JACKSON IMMUNORESEARCH LAB PHARMATEC, INC INTER-CELL TECHNOLOGIES, INC. IN VITRO INTERNATIONAL, INC. IGEN IMMUCELL CORPORATION BIO TECHNIQUES LABS., INC. ADVANCED BIOTECHNOLOGIES
1983	PRAXIS BIOLOGICS INTEK DIAGNOSTICS, INC. T-CELL SCIENCES AMERICAN DIAGNOSTICA, INC. BERKELEY ANTIBODY ONCOGENE SCIENCE, INC INFERGENE COMPANY TRITON BIOSCIENCES, INC. CONSOLIDATED BIOTECHNOLOGY, INC SEAPHARM, INC. MOLECULAR GENETIC RESOURCES IMMUNOMEDICS, INC. IDETEK, INC. HP GENENCHEM CYANOTECH CORPORATION CHARLES RIVER BIOTECH.SERVICES BIOSTAR MEDICAL PRODUCTS, INC. BIOPROBE INTERNATIONAL, INC. BIO-RECOVERY, INC. APPLIED MICROBIOLOGY AGROTEK ENVIRONMENTAL DIAGNOSTICS, INC BREIT LABORATORIES CHIMERIX EMTECH RESEARCH MONOCLONAL PRODUCTION INT'L BIOCONSEP, INC. CALZYME LABORATORIES, INC. INTERLEUKIN-2
1984	CISTRON BIOTECHNOLOGY, INC. CLONTECH LABORATORIES, INC. BENTECH LABORATORIES

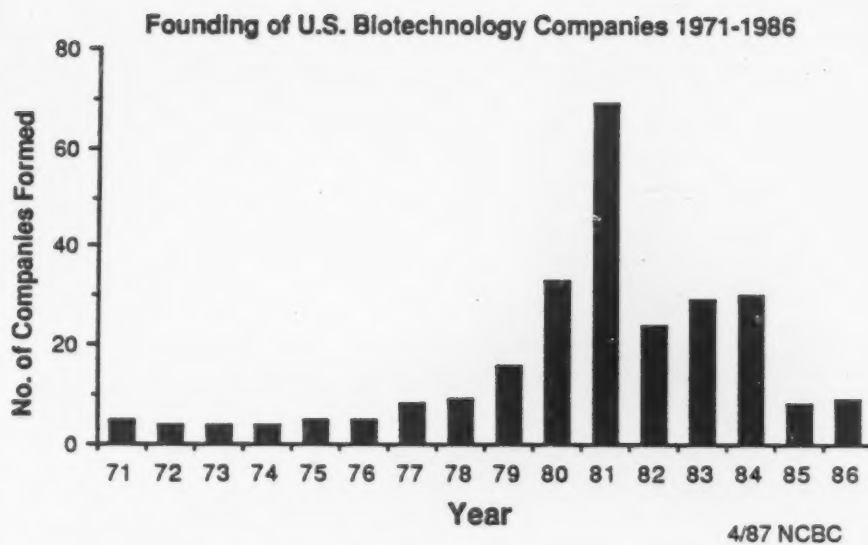
NCBC BUSINESS STUDIES PROGRAM--COMPANIES DATABASE
 BIOTECHNOLOGY COMPANIES BY YEAR OF FOUNDING
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YEAR	COMPANY NAME
1984	KIRIN-AMGEN BIOPOLYMERS, INC. COORS BIOTECH PRODUCTS CO. AMERICAN BIOTECHNOLOGY CO BIOTHERAPY SYSTEMS, INC. BIOTHERAPEUTICS, INC. BIOSCIENCE MANAGEMENT INC. BIOPURE AGRI-DIAGNOSTICS ASSOCIATES CORNING BIOMEDICAL RESEARCH INTEGRATED CHEMICAL SENSORS MONOCLONETICS INTERNAT'L, INC. UNITED BIOMEDICAL INC APPLIED PROTEIN TECHNOL. INC APPLIED BIOTECHNOLOGY AGRITECH SYSTEMS, INC O.C.S. LABS NEORX CORP. MUREX CORP. LUCKY BIOTECH CORP. KARYON TECHNOLOGY, LTD. INVITRON CORP. BIO HUMA NETICS SEPRACOR, INC. GENESIS LABS, INC. AMERICAN BIOGENETICS CORP GEN-PROBE, INC. HOUSTON BIOTECH STRATAGENE CLONING SYSTEMS ALLELIC BIOSYSTEMS APPLIED GENETICS LABS. INC.
1985	EMBREX, INC. PROTATEK INTERNATIONAL, INC. BALL BIOTECH COMPANY NYGENE CORP. CYGNUS RESEARCH CORP. BIOCONTROL SYSTEMS BIOPRODUCTS FOR SCIENCE, INC. RESEARCH&DIAGNOSTIC ANTIBODIES
1986	BIOTHERM BIONETICS RESEARCH RICERCA, INC OMNI BIOCHEM, INC. MULTIPLE PEPTIDE SYSTEMS INC CLINICAL BIOTECHNOLOGIES, INC. DIAMEDIX, INC. BINAX, INC MARICULTURA, INC. NORTH COAST BIOTECHNOLOGY INC

IV-I is a graphic representation of the number of companies founded in each year from 1971 to 1986. 276 Companies are represented.

The second page (IV-J) describes company foundings versus mergers, acquisitions and company "deaths" to give a picture of total company foundings per year.



The Number of Biotechnology Companies in the United States:

As can be seen by the preceding figure, the number of companies formed each year has declined over the past 3 years. Moreover, there have been a number of acquisitions and mergers in the industry. Our Actions database shows

1	1981
2	1982
4	1983
4	1984
2	1985

Mergers and acquisitions of companies that do not show up in our Companies database (that is, companies that will not show up as remaining separate entities and thus cannot be included in the database.

Moreover, our program to contact biotechnology companies for this study, yielded 9 companies that were listed in 1986 and earlier compendia of biotechnology companies, but appeared to be out of business at the time of our study. It is clear that many of these companies go under with little publicity.

The companies we found to be "dead" were: American Biogenics, Biochemical R and D Co., Catalytica Associates, Celtek, Dimension Diagnostics, Moleculon, Mutech, Replicon, and Ultraferm.

The 9 companies leaving the field just about offset the companies entering the industry.

Thus, with mergers, acquisitions and companies that go under, there is most likely a net loss of total biotechnology companies.

IV-K lists data from the questionnaire showing percent of involvement in biotechnology. Companies were asked to list the percent of their efforts in biotechnology as a whole and then in recombinant DNA (rDNA), monoclonal antibodies (MAb) and in cell culture (CellCult). Also listed is the primary interest classification of company, the year of founding, the company size and the type of financing (private/public/subsidiary). Note that 99% should be taken to mean 100%

The page following (IV-L) is a compendium of these data.

Company Name	year	fin. siz	prim	Percent of total efforts in:			
				%Biotech	%rDNA	%Mab	%CellCult
A/G TECHNOLOGY CORP.	1981	PRI S	E	70	0	0	0
ADVANCED BIOTECHNOLOGIES	1982	PRI S	G	99	10	0	20
ADVANCED MAGNETICS, INC.	1981	PUI M	K	99	0	10	0
ADVANCED MINERAL TECHNOLOGIES	1982	PRI S	R	75			
AGDIA, INC.	1981	PRI S	B	99	20	25	5
AGRACETUS	1981	PUI M/V	B	99	50	0	0
AGRI-DIAGNOSTICS ASSOCIATES	1984	PRI SJ	K	99			
AGRITECH SYSTEMS, INC	1984	PRI M	K			99	
ALPHA I BIOMEDICALS	1982	PUI S	P	99			
AMERICAN BIOGENETICS CORP	1984	PRI S	I	60	40		
AMERICAN BIOTECHNOLOGY CO	1984	PRI S	P			10	20
AMERICAN DIAGNOSTICA, INC.	1983	PRI S	K	99		30	
AMERICAN LABORATORIES, INC	1962	PRI M	P	99			
AMGEN	1980	PUI L	P	99	70	10	20
AMTRON	1981	PRI S	V	99			
ANGENICS	1980	PRI M	K	30		30	
ANTIVIRALS, INC	1980	PRI S	K	99	0	0	0
APPLIED PROTEIN TECHNOL. INC	1984	PRI S	F	99			
AUTOMEDIX SCIENCES, INC	1978	PRI S	P	50			
BALL BIOTECH COMPANY	1985	PRI M	O	99			
BENTECH LABORATORIES	1984	PRI S	B	99			
BERKELEY ANTIBODY	1983	PRI S	S	99	0	20	20
BETHYL LABS INC.	1977	PRI S	S	99			
BINAX, INC	1986	PRI S	K	10		10	
BIO-TECHNICAL RESOURCES, INC.	1962	PRI M	F	99			
BIOCHEM TECHNOLOGY INC	1977	PRI S	D	99			
BIOGEN	1979	PUI L	P	99	99		
BIOGENEX LABORATORIES	1981	PRI M	K			50	5
BIOLOGICS CORP	1966	SUE MU	V	10	10	25	
BIOMATERIALS INTERNATIONAL, INC	1981	PRI S	D	80			
BIOMATRIX, INC.	1981	PRI M	W				
BIOMEDICAL TECHNOLOGIES	1981	PRI S	J		0	5	75
BIONIQUE LABS INC.	1982	PRI S	H	99	10	10	80
BIOPOLYMERS, INC.	1984	PRI S	S	75			25
BIOPROBE INTERNATIONAL, INC.	1983	PRI S	E	99			
BIOSCIENCE MANAGEMENT INC.	1984	PRI S	J	99			
BIOSPHERICS	1967	PUI L	S	40			
BIOSTAR MEDICAL PRODUCTS, INC.	1983	PRI M	K	60		30	10
BIOTECHNICA INTERNATIONAL	1981	PUI L	B	99			
BIOTECHNOLOGY DEVELOPMENT CORP	1982	PUI M	F		0	0	0
BIOTHERAPEUTICS, INC.	1984	PUI L	P	75		40	35
CALGENE, INC.	1980	PRI M	B	99	90		10
CALIFORNIA BIOTECHNOLOGY INC.	1981	PUI L	P	99			
CALIFORNIA INTEGRATED DIAGNOST	1981	SUE SU	K	10		90	
CALZYME LABORATORIES, INC.	1983	PRI S	J	99			
CAMBRIDGE BIOSCIENCE CORP.	1981	PUI M	K		40	40	
CENTOCOR	1979	PUI L	P			99	

Company Name	year	fin. siz	prim	Percent of total efforts in:			
				%Biotech	%rDNA	%MAb	%CellCult
CETUS CORPORATION	1971	PUI L	P	90	50	30	10
CHEMICON INTERNATIONAL, INC	1981	PRI S	G			80	15
CHIRON CORPORATION	1981	PUI L	P	99	70	10	20
COLLAGEN CORPORATION	1975	PUI L	S			5	5
COORS BIOTECH PRODUCTS CO.	1984	SUE LU	M	50	5	0	0
COVALENT TECHNOLOGY CORP.	1981	SUE S	K	99	20		
CROP GENETICS INTERNATIONAL,NV	1981	PRI M	B		80		20
CYANOTECH CORPORATION	1983	PRI M	M				99
CYGNUS RESEARCH CORP.	1985	PRI S	S	0			
DIAGNOCORP.	1981	PUI M	A	99		25	5
DIAGNOSTIC PRODUCTS, CORP.	1972	PUI L	G	90		10	
DIAMEDIX, INC.	1986	PRI M	K			5	10
DNAX	1980	PUI MU	P	99			
E-Y LABORATORIES, INC	1978	PRI S	S	99			
ELECTRO-NUCLEONICS, INC.	1960	PUI L	K	99			25
EMBEX, INC.	1985	PRI S	A	60	10	10	20
ENDOTRONICS, INC.	1981	PUI L	F	10	5	5	80
ENZO BIOCHEM, INC.	1976	PUI L	K	25	60	10	5
ENZYME TECHNOLOGY CORP.	1981	SUE MU	O	99	15	0	0
EPITOPE, INC.	1979	PUI M	G	70		60	20
EXOVR, INC.	1981	PUI S	P	99			
GEN-PROBE, INC.	1984	PRI M	K	99			
GENENCOR, INC.	1982	PRI MJV	J	99	80		
GENESIS LABS, INC.	1984	PRI M	K	99	0	50	0
GENETIC DIAGNOSTICS CORP.	1981	PUI S	K	99			
GENZYME CORP.	1981	PUI L	P	99			
GLEN MILLS, INC.	1980	PRI S	S	15			
HP GENENCHEM	1983	PRI MJ	F	99			
HYCLONE LABORATORIES	1975	PRI L	H			10	90
IGENE BIOTECHNOLOGY INC.	1981	PUI M	M	99			
IMMUCELL CORPORATION	1982	PRI S	A	99		30	30
IMMUNEX CORP.	1981	PUI L	P	99	75	15	10
IMMUNO MODULATORS LABS. INC	1981	PRI M	P			5	95
IMMUNOMED	1979	PRI S	Q	75			25
IMMUNOMEDICS, INC.	1983	PUI M	P	99		15	5
IMMUNOTECH CORP.	1980	PRI S	K	99			
INFERGENE COMPANY	1983	PUI M	S	99			
INGENE, INC.	1980	PUI M	P	99			
INTEGRATED CHEMICAL SENSORS	1984	PRI S	D	99	0	10	0
INTEGRATED GENETICS, INC.	1981	PUI L	P	99	30		70
INTELLI-GENETICS	1980	PRI M	S		99		
INTER-CELL TECHNOLOGIES, INC.	1982	PRI S	S	99	0	5	20
INTERFERON SCIENCES, INC.	1981	PRI M	P	99	45	10	45
INTERN'TL PLANT RESEARCH INST.	1978	PRI M	B	60	10	10	20
JACKSON IMMUNOREASEARCH LAB	1982	PRI S	G	99	0	0	0
KALLESTAD LABORATORIES	1967	PRI L	K	50		30	
LIFECODES CORP.	1982	PRI M	K	99	99		

Company Name	year	fin. siz	prim	Percent of total efforts in:			
				%Biotech	%rDNA	%MAb	%CellCult
LUCKY BIOTECH CORP.	1984	SUE SU	P	99	60	20	20
MARICULTURA, INC.	1986	PRI S	T	99			
MELOY LABORATORIES, INC.	1970	SUE LU	W	99	40	50	10
MICROBIO RESOURCES	1981	PRI M	J	99			
MICROGENICS	1981	PRI M	K		33	10	10
MOLECULAR DIAGNOSTICS, INC.	1980	SUE M	K	99	55	35	10
MOLECULAR GENETIC RESOURCES	1983	PRI S	G		99		
MOLECULAR GENETICS, INC.	1979	PUI L	A	99	30	30	30
MONOCLONAL ANTIBODIES, INC.	1979	PUI L	K			99	
MONOCLONETICS INTERNAT'L, INC.	1984	PRI S	G			80	10
MULTIPLE PEPTIDE SYSTEMS INC	1986	PRI S	F	99			
MUREX CORP.	1984	PRI L	K	90	5	80	5
MYCOSEARCH, INC.	1979	PRI S	H				99
NEORX CORP.	1984	PRI M	P			99	
NEUSHUL MARICULTURE	1978	PRI S	T	99	20	20	60
NORTH COAST BIOTECHNOLOGY INC	1986	PRI S	P	99			
NPI	1973	PUI L	B	80	20		30
NYGENE CORP.	1985	PRI S	F			99	
PHARMATEC, INC	1982	PRI M	P	99			
PHYTOGEN	1980	PRI S	B	99	50	50	
PLANT GENETICS, INC.	1981	PRI M	B	75	20		55
QUEUE SYSTEMS INC	1980	PRI M	F	55			45
QUIDEL	1981	PRI L	P	99	50	50	5
R & A PLANT/SOIL INC.	1978	PRI S	T				99
RECOMTEX CORP.	1981	PRI S	K			50	50
RIBI IMMUNOCHEM RESEARCH, INC.	1981	PUI M	P	99			
RICERCA, INC	1986	SUE LU	S	5			
SEPRACOR, INC.	1984	PRI M	B		25	25	
STRATAGENE CLONING SYSTEMS	1984	PRI M	G	25	75		
SYNBIOTICS CORP.	1982	PUI M	K	90		90	
SYNTRO CORP.	1981	PUI M	A	99	80		20
SYVA CO	1966	SUE LU	K			10	
T-CELL SCIENCES	1983	PUI M	P	99	40	30	30
TRANSFORMATION RESEARCH INC.	1981	PRI S	X			99	
TRITON BIOSCIENCES, INC.	1983	SUE LU	P	95	55	35	5
UNIGENE LABORATORIES, INC.	1980	PRI M	P	99	25	20	5
UNITED AGRISEEDS INC	1981	PRI L	B		30		15
UNIVERSITY GENETICS CO.	1981	PUI M	A	99	5	10	20
VERAX CORP.	1979	PRI M	O				99
WESTBRIDGE RESEARCH GROUP	1982	PRI S	J	99			
ZOECON CORP.(SANDOZ CROP PRO)	1968	SUE LU	B	35	20	0	15
ZYMED LABORATORIES, INC.	1980	PRI S	G			90	10
ZYMOGENETICS, INC.	1981	PRI M	P	99	70		30
	1980		averag	84.1	36.2	31.3	26.5
			minimu	0	0	0	0
			Maximu	99	99	99	99
	137		count	106	58	72	70

PERCENT OF EFFORTS IN BIOTECHNOLOGY AND TECHNOLOGIES USED BY
BIOTECHNOLOGY COMPANIES: FROM QUESTIONNAIRES

	%Biotech	%rDNA	%MAb	%CellCult
average	84.9	43.7	35.8	30.9
minimum	5	5	5	5
maximum (99 is 100%)	99	99	99	99
No. of Companies With Response	105	48	63	60

THE MEDIAN COMPANY HAD 100% EFFORTS IN BIOTECHNOLOGY
72 OF 106 RESPONDING COMPANIES HAD 100% EFFORTS IN BIOTECHNOLOGY

NOTE: 2 OF 137 COMPANIES DID NOT RESPOND TO THIS QUESTION
ONLY 65 COMPANIES RESPONDED FULLY (I.E., FILLED IN TOTAL % BIOTECH
AND THE OTHER 3 CATEGORIES)

DATA FROM THESE 65 COMPANIES ARE AS FOLLOWS:

	%Biotech	%rDNA	%MAb	%CellCulture
Average	79.05	41.29	28.21	24.52
No. of Companies With Response	65	41	42	42
% of Total Companies	100	63.1	64.6	64.6

Section V Financing of biotechnology companies.

V-A is a listing of all biotechnology companies in the database, sorted by name with their private, public, or subsidiary status. Their size (S, M, or L) and number of personnel are also given, where available.

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	COMPANY	FINANCING	SIZE/TYPE	PERSONNEL
1	A/G TECHNOLOGY CORP.	PRI	S	8
2	ADVANCED BIOTECHNOLOGIES	PRI	S	17
3	ADVANCED GENETIC SCIENCES	PUB	M	93
4	ADVANCED GENETICS RES. IN	SUB	MU	25
5	ADVANCED MAGNETICS, INC.	PUB	M	30
6	ADVANCED MINERAL TECHNOLO	PRI	S	14
7	AGDIA, INC.	PRI	S	8
8	AGOURON INSTITUTE	PRI	S	
9	AGRACETUS	PRI	MJV	65
10	AGRI-DIAGNOSTICS ASSOCIAT	PRI	SJ	22
11	AGRIGENETICS CORPORATION	SUB	MU	
12	AGRITECH SYSTEMS, INC	PRI	M	70
13	AGROTEK	SUB	MU	
14	ALFACELL CORPORATION	PUB	M	22
15	ALLELIC BIOSYSTEMS	PRI	S	
16	ALPHA I BIOMEDICALS	PUB	S	9
17	AMBICO, INC.	PRI	M	25
18	AMERICAN BIOCLINICAL	PRI	M	24
19	AMERICAN BIOGENETICS CORP	PRI	S	10
20	AMERICAN BIONETICS, INC (	PRI	M	22
21	AMERICAN BIOTECHNOLOGY CO	PRI	S	5
22	AMERICAN DIAGNOSTICA, INC	PRI	S	9
23	AMERICAN LABORATORIES, IN	PRI	M	26
24	AMERICAN QUALEX INTL, INC	PRI	S	10
25	AMGEN	PUB	L	215
26	AMTRON	PRI	S	16
27	AN-CON GENETICS	SUB	SU	3
28	ANGENICS	PRI	M	50
29	ANTIBODIES, INC.	PRI	M	35
30	ANTIVIRALS, INC	PRI	S	6
31	APPLIED BIOSYSTEMS	PUB	L	350
32	APPLIED BIOTECHNOLOGY	PRI	M	
33	APPLIED GENETICS LABS. IN	PRI	S	3
34	APPLIED MICROBIOLOGY	PRI	S	20
35	APPLIED PROTEIN TECHNOL.	PRI	S	5
36	ATLANTIC ANTIBODIES	SUB	MU	60
37	AUTOMEDIX SCIENCES, INC	PRI	S	6
38	BALL BIOTECH COMPANY	PRI	M	25
39	BEHRING DIAGNOSTICS	SUB	LU	
40	BEND RESEARCH, INCORPORAT	PRI	M	45
41	BENTECH LABORATORIES	PRI	S	7
42	BERKELEY ANTIBODY	PRI	S	20
43	BETHYL LABS INC.	PRI	S	8
44	BINAX, INC	PRI	S	12
45	BIO HUMA NETICS	PRI	S	15
46	BIO TECHNIQUES LABS., INC	PRI	M	35
47	BIO-RECOVERY, INC.	PRI	M	49
48	BIO-RESPONSE INC.	PUB	M	45
49	BIO-TECHNICAL RESOURCES,	PRI	M	25
50	BIOASSAY SYSTEMS CORP.	SUB	MU	65

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	COMPANY	FINANCING	SIZE/TYPE	PERSONNEL
51	BIOCHEM TECHNOLOGY INC	PRI	S	10
52	BIOClinical SYSTEMS, INC	SUB	SU	
53	BIOCONSEP, INC.	PRI	S	6
54	BIOCONTROL SYSTEMS	PRI	S	14
55	BIOMGEN	PUB	L	360
56	BIOMGENEX LABORATORIES	PRI	M	30
57	BIOLOGICAL ENERGY CORP.	PRI	S	13
58	BIOLOGICS CORP	SUB	MU	85
59	BIOMATERIALS INTERNATIONAL	PRI	S	15
60	BIOMATRIX, INC.	PRI	M	
61	BIOMED RESEARCH LABS INC	PRI	S	
62	BIOMEDICAL TECHNOLOGIES	PRI	S	7
63	BIONETICS RESEARCH	PRI	S	
64	BIONIQUE LABS INC.	PRI	S	9
65	BIOPOLYMERS, INC.	PRI	S	15
66	BIOPROBE INTERNATIONAL, I	PRI	S	15
67	BIOPRODUCTS FOR SCIENCE,	PRI	S	19
68	BIOPURE	PRI	S	16
69	BIOSCIENCE MANAGEMENT INC	PRI	S	8
70	BIOSEARCH, INC.	SUB	MU	
71	BIOSPHERICS	PUB	L	250
72	BIOSTAR MEDICAL PRODUCTS,	PRI	M	30
73	BIOSYSTEMS, INC.	PRI	S	
74	BIOTECH RESEARCH LABS, IN	PUB	L	101
75	BIOTECHNICA INTERNATIONAL	PUB	L	145
76	BIOTECHNOLOGY DEVELOPMENT	PUB	M	35
77	BIOTECHNOLOGY GENERAL COR	PUB	M	78
78	BIOTEST DIAGNOSTICS CORP	SUB	SU	
79	BIO THERAPEUTICS, INC.	PUB	L	120
80	BIO THERAPY SYSTEMS, INC.	PUB	S	8
81	BIO THERM	PRI	S	
82	BIOTICS RESEARCH CORPORAT	PRI	M	22
83	BRAIN RESEARCH INC.	PRI	S	
84	BREIT LABORATORIES	PRI	S	15
85	CALGENE, INC.	PUB	M	165
86	CALIFORNIA BIOTECHNOLOGY	PUB	L	155
87	CALIFORNIA INTEGRATED DIA	SUB	SU	17
88	CALZYME LABORATORIES, INC.	PRI	S	10
89	CAMBRIDGE BIOSCIENCE CORP	PUB	M	55
90	CENTOCOR	PUB	L	246
91	CETUS CORPORATION	PUB	L	675
92	CHARLES	PUB	M	
93	CHARLES RIVER BIOTECH.SER	SUB	MU	
94	CHEMGENES	PRI	S	8
95	CHEMICAL DYNAMICS CORP.	PRI	M	
96	CHEMICON INTERNATIONAL, I	PRI	S	8
97	CHIMERIX	PRI	S	9
98	CHIRON CORPORATION	PUB	L	220
99	CISTRON BIOTECHNOLOGY, IN	PUB	M	30
100	CLINICAL BIOTECHNOLOGIES,	PRI	M	22

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	COMPANY	FINANCING	SIZE/TYPE	PERSONNEL
101	CLINICAL SCIENCES, INC.	PUB	M	50
102	CLONTECH LABORATORIES, IN	PUB	S	18
103	CODON	PRI	M	64
104	COLLABORATIVE RESEARCH IN	PUB	L	160
105	COLLAGEN CORPORATION	PUB	L	225
106	CONSOLIDATED BIOTECHNOLOG	PRI	S	
107	COOPER DEVELOPMENT CO.	SUB	LU	
108	COORS BIOTECH PRODUCTS CO	SUB	LU	185
109	CORNING BIOMEDICAL RESEAR	SUB	MU	
110	COVALENT TECHNOLOGY CORP.	SUB	S	16
111	CREATIVE BIOMOLECULES	PRI	M	40
112	CROP GENETICS INTERNATIONAL	PRI	M	49
113	CYANOTECH CORPORATION	PRI	M	23
114	CYGNUS RESEARCH CORP.	PRI	S	15
115	CYTOGEN CORP	PUB	M	60
116	CYTOTECH, INC	PRI	S	20
117	CYTOX CORPORATION	PUB	M	22
118	DAKO CORP	SUB	U	
119	DAMON BIOTECH INC.	SUB	L	126
120	DEKALB-PFIZER GENETICS	PRI	LJV	235
121	DELTOWN CHEMURGIC CORP.	PRI	M	90
122	DIAGNON CORP.	PUB	M	70
123	DIAGNOSTIC PRODUCTS, CORP	PUB	L	270
124	DIAGNOSTIC TECHNOLOGY, INC	PRI	M	60
125	DIAMEDIX, INC.	PRI	M	30
126	DNA PLANT TECHNOLOGY CORP	PUB	M	80
127	DNAX	PUB	MU	81
128	E-Y LABORATORIES, INC	PRI	S	20
129	ELECTRO-NUCLEONICS, INC.	PUB	L	720
130	EMBEX, INC.	PRI	S	17
131	EMTECH RESEARCH	PRI	M	30
132	ENDOTRONICS, INC.	PUB	L	155
133	ENGENICS, INC.	PRI	M	30
134	ENVIRONMENTAL DIAGNOSTICS	PUB	M	55
135	ENZO BIOCHEM, INC.	PUB	L	110
136	ENZON	PUB	M	22
137	ENZON, INC.	PUB	M	31
138	ENZYME CENTER INC., THE	PRI	M	30
139	ENZYME TECHNOLOGY CORP.	SUB	MU	26
140	EPITOPE, INC.	PUB	M	21
141	EXOVR, INC.	PUB	S	5
142	FERMENTEC CORP	PRI	M	30
143	FLOW LABORATORIES, INC.	SUB	LU	
144	GAMETRICS, LTD.	PRI	S	
145	GAMMA BIOLOGICALS, INC.	PUB	L	166
146	GEN-PROBE, INC.	PRI	M	113
147	GENENCOR, INC.	PRI	MJV	100
148	GENENTECH	PUB	L	950
149	GENESIS LABS, INC.	PRI	M	29
150	GENETIC DIAGNOSTICS CORP.	PUB	S	17

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	COMPANY	FINANCING	SIZE/TYPE	PERSONNEL
151	GENETIC ENGINEERING, INC.	PUB	M	23
152	GENETIC SYSTEMS CORP.	SUB	LU	400
153	GENETICS INSTITUTE, INC.	PUB	L	288
154	GENEX INC.	PUB	M	
155	GENTRONIX, INC.	PRI	S	6
156	GENZYME CORP.	PUB	L	185
157	GLEN MILLS, INC.	PRI	S	11
158	GRANADA GENETICS CORP.	SUB	SU	3
159	HANA BIOLOGICS, INC.	PUB	M	82
160	HAWAII BIOTECHNOLOGY GROU	PRI	S	10
161	HAZLETON BIOTECHNOLOGIES	SUB	LU	500
162	HOUSTON BIOTECH	PRI	M	
163	HP GENENCHEM	PRI	MJ	
164	HYBRITECH, INC.	SUB	LU	
165	HYCLONE LABORATORIES	PRI	L	107
166	HYGEIA SCIENCES	PUB	M	70
167	IDEC, INC.	PRI		
168	IDETEK, INC.	PRI	S	14
169	IGEN	PRI		
170	IGENE BIOTECHNOLOGY INC.	PUB	M	30
171	IMMUCELL CORPORATION	PRI	S	17
172	IMMUNETECH PHARMACEUTICAL	PRI	M	45
173	IMMUNEX CORP.	PUB	L	153
174	IMMUNO MODULATORS LABS. I	PRI	M	25
175	IMMUNOGEN, INC.	PRI	S	11
176	IMMUNOMED	PRI	S	17
177	IMMUNOMEDICS, INC.	PUB	M	55
178	IMMUNOTECH CORP.	PRI	S	15
179	IMRE CORP	PUB	M	23
180	IMREG, INC.	PUB	M	31
181	IN VITRO INTERNATIONAL, I	PRI	JV	
182	INCELL CORPORATION	PRI	M	23
183	INFERGENE COMPANY	PUB	M	25
184	INGENE, INC.	PUB	M	65
185	INTEGRATED CHEMICAL SENSO	PRI	S	8
186	INTEGRATED GENETICS, INC.	PUB	L	200
187	INTEK DIAGNOSTICS, INC.	PRI	M	33
188	INTELLI-GENETICS	PRI	M	49
189	INTER-AMERICAN RESEARCH A	PRI	M	44
190	INTER-CELL TECHNOLOGIES,	PRI	S	9
191	INTERFERON SCIENCES, INC.	PRI	M	70
192	INTERLEUKIN-2	PUB	S	
193	INTERN'TL ENZYMES, INC.	PRI	S	4
194	INTERN'TL MINERAL & CHEMI	PUB	C	
195	INTERN'TL PLANT RESEARCH	PRI	M	50
196	INTRA GENE INTERNATIONAL	PRI	S	12
197	INVITRON CORP.	PRI	L	200
198	JACKSON IMMUNOREASEARCH L	PRI	S	16
199	KALLESTAD LABORATORIES	PRI	L	330
200	KARYON TECHNOLOGY, LTD.	PRI	M	25

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	COMPANY	FINANCING	SIZE/TYPE	PERSONNEL
201	KIRIN-AMGEN	PRI	MJV	
202	LEE BIOMOLECULAR RESEARCH	PRI	S	16
203	LIFE SCIENCES	PUB	S	20
204	LIFECODES CORP.	PRI	M	53
205	LIFECORE, INC	PUB	S	20
206	LIPOSOME COMPANY INC.	PUB	M	67
207	LIPOSOME TECHNOLOGY	PRI	M	65
208	LUCKY BIOTECH CORP.	SUB	SU	4
209	MARCOR DEVELOPMENT CORP.	PRI	S	6
210	MARICULTURA, INC.	PRI	S	7
211	MELOY LABORATORIES, INC.	SUB	LU	246
212	MICROBIO RESOURCES	PRI	M	39
213	MICROBIOLOGICAL ASSOCIATE	PRI	L	215
214	MICROGENICS	PRI	M	70
215	MOLECULAR BIOSYSTEMS, INC	PUB	M	27
216	MOLECULAR DIAGNOSTICS, IN	SUB	M	30
217	MOLECULAR GENETIC RESOURC	PRI	S	5
218	MOLECULAR GENETICS, INC	PUB	L	125
219	MONOCLONAL ANTIBODIES, IN	PUB	L	136
220	MONOCLONAL PRODUCTION INT	PRI	S	4
221	MONOCLONETICS INTERNAT'L,	PRI	S	5
222	MULTIPLE PEPTIDE SYSTEMS	PRI	S	2
223	MUREX CORP.	PRI	L	180
224	MYCOGEN	PRI	M	50
225	MYCOSEARCH, INC.	PRI	S	4
226	NATIONAL GENO SCIENCES	PRI	S	4
227	NEOGEN CORP.	PRI	M	
228	NEORX CORP.	PRI	M	100
229	NEUSHUL MARICULTURE	PRI	S	6
230	NMS PHARMACEUTICALS	PUB	M	30
231	NORTH COAST BIOTECHNOLOGY	PRI	S	2
232	NPI	PUB	L	625
233	NUCLEAR & GENETIC TECHNOL	PUB	S	15
234	NYGENE CORP.	PRI	S	18
235	O.C.S. LABS	PRI	S	12
236	OCEAN GENETICS	PRI	S	8
237	OMNI BIOCHEM, INC.	PRI	S	5
238	ONCOGENE SCIENCE, INC	PUB	M	50
239	PEL-FREEZ BIOLOGICALS, IN	PRI	M	
240	PENINSULA LABORATORIES, I	PRI	M	
241	PETROFERM USA	PRI	M	68
242	PETROGEN INC.	PRI	S	
243	PHARMACIA BIOTECHNOLOGY G	SUB	CU	
244	PHARMATEC, INC	PRI	M	25
245	PHYTOGEN	PRI	S	20
246	PLANT GENETICS, INC.	PRI	M	63
247	PRAXIS BIOLOGICS	PUB	Z	
248	PROMEGA BIOTECH	PRI	L	
249	PROTATEK INTERNATIONAL, I	PRI	S	
250	QUEUE SYSTEMS INC	PRI	M	85

NCBC BIOTECHNOLOGY COMPANIES DATABASE
BIOTECHNOLOGY COMPANIES SORTED BY FINANCING
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	COMPANY	FINANCING	SIZE/TYPE	PERSONNEL
251	QUIDEL	PRI	L	325
252	R & A PLANT/SOIL INC.	PRI	S	6
253	RECOMTEX CORP.	PRI	S	12
254	REPLIGEN CORP.	PUB	M	
255	RESEARCH&DIAGNOSTIC ANTIB	PRI	S	
256	RIBI IMMUNOCHEM RESEARCH,	PUB	M	35
257	RICERCA, INC	SUB	LU	160
258	SCOTT LABORATORIES	SUB	LU	375
259	SCRIPPS LABORATORIES	PRI	M	
260	SEAPHARM, INC.	PRI	M	50
261	SEPRACOR, INC.	PRI	M	40
262	SERAGEN, INC	SUB	L	250
263	SERONO LABS	PRI	L	90
264	SIBIA	PRI	M	65
265	SOUTHERN BIOTECH ASSOCIAT	PRI	S	9
266	STRATAGENE CLONING SYSTEM	PRI	M	40
267	SUMMA MEDICAL CORP.	PUB	M	33
268	SUNGENE TECHNOLOGIES CORP	PRI	S	28
269	SYNBIOTICS CORP.	PUB	M	89
270	SYNERGEN, INC.	PUB	L	101
271	SYNGENE PRODUCTS	SUB	SU	20
272	SYNTRO CORP.	PUB	M	84
273	SYVA CO	SUB	LU	1000
274	T-CELL SCIENCES	PUB	M	49
275	TECHNICLONE INTERNATIONAL	PUB	S	9
276	TECHNOMETRICS, INC.	PRI	S	
277	THREE-M(3M) DIAGNOSTIC SY	SUB	LU	130
278	TOXICON	PRI	M	35
279	TRANSFORMATION RESEARCH I	PRI	S	4
280	TRITON BIOSCIENCES, INC.	SUB	LU	140
281	UNIGENE LABORATORIES, INC	PRI	M	30
282	UNITED AGRISEEDS INC	PRI	L	192
283	UNITED BIOMEDICAL INC	PRI	S	10
284	UNITED STATES BIOCHEMICAL	PRI	L	
285	UNIVERSITY GENETICS CO.	PUB	M	100
286	UNIVERSITY MICRO REFERENC	PRI	S	
287	VECTOR LABORATORIES, INC.	PRI	M	
288	VEGA BIOTECHNOLOGIES, INC	PUB	L	
289	VERAX CORP.	PRI	M	80
290	VIRAGEN	PUB	S	15
291	WESTBRIDGE RESEARCH GROUP	PRI	S	15
292	XENOGEN	PRI	S	
293	XOMA CORP.	PUB	L	123
294	ZOECON CORP. (SANDOZ CROP	SUB	LU	130
295	ZYMED LABORATORIES, INC.	PRI	S	20
296	ZYMOGENETICS, INC.	PRI	M	95

V-B lists all biotechnology companies in the database, sorted by private, public or subsidiary status.

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	COMPANY	FINANCING	SIZE/TYPE	PERSONNEL
1	AGDIA, INC.	PRI	S	8
2	AGRITECH SYSTEMS, INC	PRI	M	70
3	ALLELIC BIOSYSTEMS	PRI	S	
4	AMBICO, INC.	PRI	M	25
5	AMERICAN BIOCLINICAL	PRI	M	24
6	AMERICAN BIOTECHNOLOGY CO	PRI	S	5
7	AMERICAN QUALEX INTL, INC	PRI	S	10
8	ANTIBODIES, INC.	PRI	M	35
9	APPLIED BIOTECHNOLOGY	PRI	M	
10	APPLIED GENETICS LABS. IN	PRI	S	3
11	APPLIED MICROBIOLOGY	PRI	S	20
12	APPLIED PROTEIN TECHNOL.	PRI	S	5
13	BETHYL LABS INC.	PRI	S	8
14	BIO TECHNIQUES LABS., INC	PRI	M	35
15	BIO-RECOVERY, INC.	PRI	M	49
16	BIO-TECHNICAL RESOURCES,	PRI	M	25
17	BIOMED RESEARCH LABS INC	PRI	S	
18	BIOSTAR MEDICAL PRODUCTS,	PRI	M	30
19	BIOSYSTEMS, INC.	PRI	S	
20	BIOTHERM	PRI	S	
21	BIOTICS RESEARCH CORPORAT	PRI	M	22
22	CLINICAL BIOTECHNOLOGIES,	PRI	M	22
23	DIAMEDIX, INC.	PRI	M	30
24	EMBEX, INC.	PRI	S	17
25	IDETEK, INC.	PRI	S	14
26	INCELL CORPORATION	PRI	M	23
27	INTEK DIAGNOSTICS, INC.	PRI	M	33
28	INTER-AMERICAN RESEARCH A	PRI	M	44
29	INTER-CELL TECHNOLOGIES,	PRI	S	9
30	INVITRON CORP.	PRI	L	200
31	NORTH COAST BIOTECHNOLOGY	PRI	S	2
32	NYGENE CORP.	PRI	S	18
33	O.C.S. LABS	PRI	S	12
34	PROTATEK INTERNATIONAL, I	PRI	S	
35	SIBIA	PRI	M	65
36	TOXICON	PRI	M	35
37	UNITED BIOMEDICAL INC	PRI	S	10
38	INTERFERON SCIENCES, INC.	PRI	M	70
39	GENENCOR, INC.	PRI	MJV	100
40	SERONO LABS	PRI	L	90
41	BIOPURE	PRI	S	16
42	BREIT LABORATORIES	PRI	S	15
43	BIOPRODUCTS FOR SCIENCE,	PRI	S	19
44	IN VITRO INTERNATIONAL, I	PRI	JV	
45	DEKALB-PFIZER GENETICS	PRI	LJV	235
46	NEUSHUL MARICULTURE	PRI	S	6
47	GEN-PROBE, INC.	PRI	M	113
48	AUTOMEDIX SCIENCES, INC	PRI	S	6
49	SCRIPPS LABORATORIES	PRI	M	
50	BIONETICS RESEARCH	PRI	S	

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	COMPANY	FINANCING	SIZE/TYPE	PERSONNEL
51	BINAX, INC	PRI	S	12
52	NEORX CORP.	PRI	M	100
53	BIOCONTROL SYSTEMS	PRI	S	14
54	BIO HUMA NETICS	PRI	S	15
55	AGRACETUS	PRI	MJV	65
56	KIRIN-AMGEN	PRI	MJV	
57	QUIDEL	PRI	L	325
58	LIFECODES CORP.	PRI	M	53
59	ANTIVIRALS, INC	PRI	S	6
60	OMNI BIOCHEM, INC.	PRI	S	5
61	INTERN'TL PLANT RESEARCH	PRI	M	50
62	SEPRACOR, INC.	PRI	M	40
63	CYGNUS RESEARCH CORP.	PRI	S	15
64	HP GENENCHEM	PRI	MJ	
65	IMMUNOMED	PRI	S	17
66	AMERICAN BIOGENETICS CORP	PRI	S	10
67	BENTECH LABORATORIES	PRI	S	7
68	BIOCHEM TECHNOLOGY INC	PRI	S	10
69	BIOGENEX LABORATORIES	PRI	M	30
70	BIOMEDICAL TECHNOLOGIES	PRI	S	7
71	BIOPOLYMERS, INC.	PRI	S	15
72	BIOSCIENCE MANAGEMENT INC	PRI	S	8
73	IMMUCELL CORPORATION	PRI	S	17
74	INTELLI-GENETICS	PRI	M	49
75	JACKSON IMMUNOREASEARCH L	PRI	S	16
76	MOLECULAR GENETIC RESOURC	PRI	S	5
77	MULTIPLE PEPTIDE SYSTEMS	PRI	S	2
78	PHYTOGEN	PRI	S	20
79	RECOMTEX CORP.	PRI	S	12
80	ZYMED LABORATORIES, INC.	PRI	S	20
81	QUEUE SYSTEMS INC	PRI	M	85
82	PHARMATEC, INC	PRI	M	25
83	UNITED AGRISEEDS INC	PRI	L	192
84	BIONIQUE LABS INC.	PRI	S	9
85	VERAX CORP.	PRI	M	80
86	CYANOTECH CORPORATION	PRI	M	23
87	INTEGRATED CHEMICAL SENSO	PRI	S	8
88	STRATAGENE CLONING SYSTEM	PRI	M	40
89	UNIGENE LABORATORIES, INC	PRI	M	30
90	MUREX CORP.	PRI	L	180
91	AMERICAN BIONETICS, INC (	PRI	M	22
92	ADVANCED BIOTECHNOLOGIES	PRI	S	17
93	AMERICAN DIAGNOSTICA, INC	PRI	S	9
94	AMERICAN LABORATORIES, IN	PRI	M	26
95	ANGENICS	PRI	M	50
96	BERKELEY ANTIBODY	PRI	S	20
97	BIOCONSEP, INC.	PRI	S	6
98	BIOLOGICAL ENERGY CORP.	PRI	S	13
99	BIOMATRIX, INC.	PRI	M	
100	CALZYME LABORATORIES, INC.	PRI	S	10

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	COMPANY	FINANCING	SIZE/TYPE	PERSONNEL
101	CHEMGENES	PRI	S	8
102	CHEMICAL DYNAMICS CORP.	PRI	M	
103	CHEMICON INTERNATIONAL, I	PRI	S	8
104	CHIMERIX	PRI	S	9
105	CODON	PRI	M	64
106	CONSOLIDATED BIOTECHNOLOG	PRI	S	
107	CYTOTECH, INC	PRI	S	20
108	DIAGNOSTIC TECHNOLOGY, INC	PRI	M	60
109	E-Y LABORATORIES, INC	PRI	S	20
110	ENGENICS, INC.	PRI	M	30
111	ENZYME CENTER INC., THE	PRI	M	30
112	FERMENTEC CORP	PRI	M	30
113	GAMETRICS, LTD.	PRI	S	
114	GLEN MILLS, INC.	PRI	S	11
115	HOUSTON BIOTECH	PRI	M	
116	HYCLONE LABORATORIES	PRI	L	107
117	IDEC, INC.	PRI		
118	IMMUNETECH PHARMACEUTICAL	PRI	M	45
119	IMMUNO MODULATORS LABS. I	PRI	M	25
120	IMMUNOGEN, INC.	PRI	S	11
121	IMMUNOTECH CORP.	PRI	S	15
122	INTERN'TL ENZYMES, INC.	PRI	S	4
123	INTRA GENE INTERNATIONAL	PRI	S	12
124	KARYON TECHNOLOGY, LTD.	PRI	M	25
125	LEE BIOMOLECULAR RESEARCH	PRI	S	16
126	MARCOR DEVELOPMENT CORP.	PRI	S	6
127	MICROBIO RESOURCES	PRI	M	39
128	MICROGENICS	PRI	M	70
129	MONOCLONAL PRODUCTION INT	PRI	S	4
130	MONOCLONETICS INTERNAT'L,	PRI	S	5
131	MYCOGEN	PRI	M	50
132	MYCOSEARCH, INC.	PRI	S	4
133	NATIONAL GENO SCIENCES	PRI	S	4
134	NEOGEN CORP.	PRI	M	
135	OCEAN GENETICS	PRI	S	8
136	PEL-FREEZ BIOLOGICALS, IN	PRI	M	
137	PENINSULA LABORATORIES, I	PRI	M	
138	PETROGEN INC.	PRI	S	
139	PLANT GENETICS, INC.	PRI	M	63
140	R & A PLANT/SOIL INC.	PRI	S	6
141	RESEARCH&DIAGNOSTIC ANTIB	PRI	S	
142	SEAPHARM, INC.	PRI	M	50
143	SOUTHERN BIOTECH ASSOCIAT	PRI	S	9
144	TRANSFORMATION RESEARCH I	PRI	S	4
145	UNITED STATES BIOCHEMICAL	PRI	L	
146	UNIVERSITY MICRO REFERENC	PRI	S	
147	VECTOR LABORATORIES, INC.	PRI	M	
148	WESTBRIDGE RESEARCH GROUP	PRI	S	15
149	ZYMOGENETICS, INC.	PRI	M	95
150	TECHNOMETRICS, INC.	PRI	S	

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	COMPANY	FINANCING	SIZE/TYPE	PERSONNEL
151	KALLESTAD LABORATORIES	PRI	L	330
152	AGRI-DIAGNOSTICS ASSOCIAT	PRI	SJ	22
153	BALL BIOTECH COMPANY	PRI	M	25
154	BEND RESEARCH, INCORPORAT	PRI	M	45
155	CROP GENETICS INTERNATIONAL	PRI	M	49
156	A/G TECHNOLOGY CORP.	PRI	S	8
157	IGEN	PRI		
158	XENOGEN	PRI	S	
159	CREATIVE BIOMOLECULES	PRI	M	40
160	SUNGENE TECHNOLOGIES CORP	PRI	S	28
161	AMTRON	PRI	S	16
162	MARICULTURA, INC.	PRI	S	7
163	DELTON CHEMURGIC CORP.	PRI	M	90
164	MICROBIOLOGICAL ASSOCIATE	PRI	L	215
165	PETROFERM USA	PRI	M	68
166	ADVANCED MINERAL TECHNOLO	PRI	S	14
167	BRAIN RESEARCH INC.	PRI	S	
168	BIOPROBE INTERNATIONAL, I	PRI	S	15
169	LIPOSOME TECHNOLOGY	PRI	M	65
170	GENESIS LABS, INC.	PRI	M	29
171	BIOMATERIALS INTERNATIONAL	PRI	S	15
172	HAWAII BIOTECHNOLOGY GROU	PRI	S	10
173	AGOURON INSTITUTE	PRI	S	
174	PROMEGA BIOTECH	PRI	L	
175	GENTRONIX, INC.	PRI	S	6
176	EMTECH RESEARCH	PRI	M	30
177	BIOGEN	PUB	L	360
178	CALGENE, INC.	PUB	M	165
179	CALIFORNIA BIOTECHNOLOGY	PUB	L	155
180	CLONTECH LABORATORIES, IN	PUB	S	18
181	DIAGNOSTIC PRODUCTS, CORP	PUB	L	270
182	ENVIRONMENTAL DIAGNOSTICS	PUB	M	55
183	INTEGRATED GENETICS, INC.	PUB	L	200
184	NPI	PUB	L	625
185	ADVANCED GENETIC SCIENCES	PUB	M	93
186	BIOTECHNICA INTERNATIONAL	PUB	L	145
187	BIO THERAPY SYSTEMS, INC.	PUB	S	8
188	CENTOCOR	PUB	L	246
189	BIO-RESPONSE INC.	PUB	M	45
190	VEGA BIOTECHNOLOGIES, INC	PUB	L	
191	ADVANCED MAGNETICS, INC.	PUB	M	30
192	HYGEIA SCIENCES	PUB	M	70
193	APPLIED BIOSYSTEMS	PUB	L	350
194	AMGEN	PUB	L	215
195	INGENE, INC.	PUB	M	65
196	GAMMA BIOLOGICALS, INC.	PUB	L	166
197	ENZON, INC.	PUB	M	31
198	HANA BIOLOGICS, INC.	PUB	M	82
199	CISTRON BIOTECHNOLOGY, IN	PUB	M	30
200	T-CELL SCIENCES	PUB	M	49

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	COMPANY	FINANCING	SIZE/TYPE	PERSONNEL
201	COLLAGEN CORPORATION	PUB	L	225
202	INTERN'TL MINERAL & CHEMI	PUB	C	
203	PRAXIS BIOLOGICS	PUB	Z	
204	BIOTECHNOLOGY GENERAL COR	PUB	M	78
205	CYTOGEN CORP	PUB	M	60
206	LIPOSOME COMPANY INC.	PUB	M	67
207	ONCOGENE SCIENCE, INC	PUB	M	50
208	TECHNICLONE INTERNATIONAL	PUB	S	9
209	ENDOTRONICS, INC.	PUB	L	155
210	IGENE BIOTECHNOLOGY INC.	PUB	M	30
211	GENETIC DIAGNOSTICS CORP.	PUB	S	17
212	GENZYME CORP.	PUB	L	185
213	UNIVERSITY GENETICS CO.	PUB	M	100
214	BIOSPHERICS	PUB	L	250
215	SYNTRO CORP.	PUB	M	84
216	EPITOPE, INC.	PUB	M	21
217	IMMUNEX CORP.	PUB	L	153
218	CETUS CORPORATION	PUB	L	675
219	INFERGENE COMPANY	PUB	M	25
220	ALPHA I BIOMEDICALS	PUB	S	9
221	SYNBIOTICS CORP.	PUB	M	89
222	BIOTECHNOLOGY DEVELOPMENT	PUB	M	35
223	BIOTHERAPEUTICS, INC.	PUB	L	120
224	MONOCLONAL ANTIBODIES, IN	PUB	L	136
225	RIBI IMMUNOCHEM RESEARCH,	PUB	M	35
226	ALFACELL CORPORATION	PUB	M	22
227	CLINICAL SCIENCES, INC.	PUB	M	50
228	COLLABORATIVE RESEARCH IN	PUB	L	160
229	DNA PLANT TECHNOLOGY CORP	PUB	M	80
230	EXOVIR, INC.	PUB	S	5
231	GENEX INC.	PUB	M	
232	IMREG, INC.	PUB	M	31
233	INTERLEUKIN-2	PUB	S	
234	LIFECORE, INC	PUB	S	20
235	MOLECULAR BIOSYSTEMS, INC	PUB	M	27
236	SUMMA MEDICAL CORP.	PUB	M	33
237	CAMBRIDGE BIOSCIENCE CORP	PUB	M	55
238	CHARLES	PUB	M	
239	GENETICS INSTITUTE, INC.	PUB	L	288
240	GENENTECH	PUB	L	950
241	DNAX	PUB	MU	81
242	ENZO BIOCHEM, INC.	PUB	L	110
243	ELECTRO-NUCLEONICS, INC.	PUB	L	720
244	NMS PHARMACEUTICALS	PUB	M	30
245	VIRAGEN	PUB	S	15
246	ENZON	PUB	M	22
247	NUCLEAR & GENETIC TECHNOL	PUB	S	15
248	IMMUNOMEDICS, INC.	PUB	M	55
249	GENETIC ENGINEERING, INC.	PUB	M	23
250	CYTOX CORPORATION	PUB	M	22

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	COMPANY	FINANCING	SIZE/TYPE	PERSONNEL
251	SYNERGEN, INC.	PUB	L	101
252	XOMA CORP.	PUB	L	123
253	LIFE SCIENCES	PUB	S	20
254	MOLECULAR GENETICS, INC	PUB	L	125
255	REPLIGEN CORP.	PUB	M	
256	BIOTECH RESEARCH LABS, IN	PUB	L	101
257	DIAGNON CORP.	PUB	M	70
258	CHIRON CORPORATION	PUB	L	220
259	IMRE CORP	PUB	M	23
260	CORNING BIOMEDICAL RESEAR	SUB	MU	
261	GENETIC SYSTEMS CORP.	SUB	LU	400
262	THREE-M(3M) DIAGNOSTIC SY	SUB	LU	130
263	BIOCLINICAL SYSTEMS, INC	SUB	SU	
264	DAKO CORP	SUB	U	
265	FLOW LABORATORIES, INC.	SUB	LU	
266	GRANADA GENETICS CORP.	SUB	SU	3
267	SERAGEN, INC	SUB	L	250
268	PHARMACIA BIOTECHNOLOGY G	SUB	CU	
269	CALIFORNIA INTEGRATED DIA	SUB	SU	17
270	BIOLOGICS CORP	SUB	MU	85
271	AN-CON GENETICS	SUB	SU	3
272	ADVANCED GENETICS RES. IN	SUB	MU	25
273	ATLANTIC ANTIBODIES	SUB	MU	60
274	RICERCA, INC	SUB	LU	160
275	BEHRING DIAGNOSTICS	SUB	LU	
276	SYNGENE PRODUCTS	SUB	SU	20
277	HYBRITECH, INC.	SUB	LU	
278	MOLECULAR DIAGNOSTICS, IN	SUB	M	30
279	COOPER DEVELOPMENT CO.	SUB	LU	
280	HAZLETON BIOTECHNOLOGIES	SUB	LU	500
281	SCOTT LABORATORIES	SUB	LU	375
282	BIOSEARCH, INC.	SUB	MU	
283	BIOASSAY SYSTEMS CORP.	SUB	MU	65
284	SYVA CO	SUB	LU	1000
285	COORS BIOTECH PRODUCTS CO	SUB	LU	185
286	CHARLES RIVER BIOTECH.SER	SUB	MU	
287	BIOTEST DIAGNOSTICS CORP	SUB	SU	
288	DAMON BIOTECH INC.	SUB	L	126
289	ENZYME TECHNOLOGY CORP.	SUB	MU	26
290	COVALENT TECHNOLOGY CORP.	SUB	S	16
291	LUCKY BIOTECH CORP.	SUB	SU	4
292	MELOY LABORATORIES, INC.	SUB	LU	246
293	ZOECON CORP.(SANDOZ CROP	SUB	LU	130
294	TRITON BIOSCIENCES, INC.	SUB	LU	140
295	AGROTEK	SUB	MU	
296	AGRIGENETICS CORPORATION	SUB	MU	

V-C is a table of numbers of companies (and numbers in our questionnaire study) who fit into the categories: startups, joint ventures, subsidiaries, privately held, or public companies. The percent of companies in each category with questionnaires returned is also indicated.

NORTH CAROLINA BIOTECHNOLOGY CENTER COMPANIES DATABASE

	BIOTECH COS.	% TOTAL	NO. OF QUEST.	% TOTAL
ALL COMPANIES	296	100%	137	46%
STARTUPS	255	86%	123	48%
JOINT VENTURES	7	2.4%	2	29%
SUBSIDIARIES	37	14%	13	36%
PRIVATELY HELD	175	59%	86	49%
PUBLIC COMPANIES	82	28%	39	48%

TOTAL OF 296 COMPANIES, AND 137 QUESTIONNAIRES RETURNED.
THE FIRST PERCENT FIGURE IS THE PERCENT OF ALL (296) COMPANIES THAT FIT THE
CATEGORY; THE SECOND PERCENT FIGURE IS THE PERCENT OF TOTAL COMPANIES IN THAT
CATEGORY THAT HAD RETURNED QUESTIONNAIRES.

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V-D is a listing of equity ownership in U.S. biotechnology companies, from the returned questionnaires. The number of U.S. or Foreign equity holders and their names are shown, where applicable. Where "0" is entered, that means that there were no equity holders. Where the number is blank, no information was supplied. SOURCE refers to the sources of information (Q=questionnaire, D=directories, L=literature). Type refers to the company size (S, M, or L)

NCBC BUSINESS STUDIES PROGRAM - COMPANIES DATABASE
EQUITY OWNERSHIP IN US BIOTECHNOLOGY COMPANIES
EQUITY SORTED BY US COMPANY NAME

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	COMPANY NAME	INVESTORS
1	A/G TECHNOLOGY CORP. TYPE:S SOURCE:QL	US:0 FOREIGN:
2	ADVANCED BIOTECHNOLOGIES TYPE:S SOURCE:QD	US:0 NONE FOREIGN: NONE
3	ADVANCED MAGNETICS, INC. TYPE:M SOURCE:QD	US: FOREIGN:
4	ADVANCED MINERAL TECHNOLOGIES TYPE:S SOURCE:QL	US: FOREIGN:
5	AGDIA, INC. TYPE:S SOURCE:DQ	US:0 NONE FOREIGN:
6	AGRACETUS TYPE:MJV SOURCE:QL	US:2 CETUS MADISON CORP; GRACE ASC CORP FOREIGN:
7	AGRI-DIAGNOSTICS ASSOCIATES TYPE:SJ SOURCE:QL	US:2 KOPPERS CO=60%, DNAP=40% FOREIGN:
8	AGRITECH SYSTEMS, INC TYPE:M SOURCE:Q	US: FOREIGN: VARIOUS EUROPEAN
9	ALPHA I BIOMEDICALS TYPE:S SOURCE:QL	US: FOREIGN:
10	AMERICAN BIOGENETICS CORP TYPE:S SOURCE:Q	US:0 FOREIGN:
11	AMERICAN BIOTECHNOLOGY CO TYPE:S SOURCE:Q	US:1 COOPER BIOMEDICAL INC=\$300,000 1985-86 FOREIGN:
12	AMERICAN DIAGNOSTICA, INC. TYPE:S SOURCE:Q	US: FOREIGN:
13	AMERICAN LABORATORIES, INC TYPE:M SOURCE:Q	US:0 NONE FOREIGN: NONE
14	AMGEN TYPE:L SOURCE:Q	US:2 ABBOTT LABS; SMITHKLINE BECKMAN FOREIGN: KIRIN BREWERY CO.,LTD
15	AMTRON TYPE:S SOURCE:Q	US:1 FOREIGN:
16	ANGENICS TYPE:M SOURCE:Q	US:0 NONE FOREIGN: NONE
17	ANTIVIRALS, INC TYPE:S SOURCE:QL	US:1 DUPONT FOREIGN:

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	COMPANY NAME	INVESTORS
18	APPLIED PROTEIN TECHNOL. INC TYPE:S SOURCE:QL	US:0 FOREIGN:
19	AUTOMEDIX SCIENCES, INC TYPE:S SOURCE:Q	US:0 FOREIGN:
20	BALL BIOTECH COMPANY TYPE:M SOURCE:Q	US:1 GEO. T. BALL FOREIGN: NONE
21	BENTECH LABORATORIES TYPE:S SOURCE:Q	US: FOREIGN:
22	BERKELEY ANTIBODY TYPE:S SOURCE:Q	US:0 NONE FOREIGN: NONE
23	BETHYL LABS INC. TYPE:S SOURCE:Q	US:0 NONE FOREIGN: NONE
24	BINAX, INC TYPE:S SOURCE:QL	US:0 NONE FOREIGN: NONE
25	BIO-TECHNICAL RESOURCES, INC. TYPE:M SOURCE:DQL	US:0 NONE FOREIGN: NONE
26	BIOCHEM TECHNOLOGY INC TYPE:S SOURCE:Q	US:1 BERWIND CORP FOREIGN:
27	BIOGEN TYPE:L SOURCE:Q	US:1 SCHERING-PLOUGH, FOREIGN: INCO
28	BIOGENEX LABORATORIES TYPE:M SOURCE:Q	US: FOREIGN:
29	BIOLOGICS CORP TYPE:MU SOURCE:QL	US: SUBSID OF TECH AMERICA WHICH IS NOW 513 FOREIGN:
30	BIOMATERIALS INTERNATIONAL, INC TYPE:S SOURCE:Q	US:1 HOSPITAL CORP OF AMERICA FOREIGN: NONE
31	BIOMATRIX, INC. TYPE:M SOURCE:QL	US: FOREIGN:
32	BIOMEDICAL TECHNOLOGIES TYPE:S SOURCE:Q	US: NA FOREIGN:
33	BIONIQUE LABS INC. TYPE:S SOURCE:QL	US: FOREIGN:
34	BIOPOLYMERS, INC. TYPE:S SOURCE:Q	US: FOREIGN:

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	COMPANY NAME		INVESTORS
35	BIOPROBE INTERNATIONAL, INC.	US:3	TIE CORP; SUCSY FISCHER SECURITY; STEIN
	TYPE:S SOURCE:Q	FOREIGN:	TR NORTH AMERICA
36	BIOSCIENCE MANAGEMENT INC.	US:0	NONE
	TYPE:S SOURCE:QL	FOREIGN:	NONE
37	BIOSPHERICS	US:	
	TYPE:L SOURCE:Q	FOREIGN:	MONTEDIVON; FERRUZZI GROUP
38	BIOSTAR MEDICAL PRODUCTS, INC.	US:	
	TYPE:M SOURCE:Q	FOREIGN:	SKANDIGEN A.B., SWEDEN; KEMA NOBEL A.B. (
39	BIOTECHNICA INTERNATIONAL	US:	
	TYPE:L SOURCE:QL	FOREIGN:	SEAGRAM CO. LTD (CANADA)
40	BIOTECHNOLOGY DEVELOPMENT CORP	US:1	GD SEARLE (IN SUBSIDIARY)
	TYPE:M SOURCE:Q	FOREIGN:	
41	BIOTHERAPEUTICS, INC.	US:0	NONE
	TYPE:L SOURCE:QL	FOREIGN:	NONE
42	CALGENE, INC.	US:2	ALLIED CHEMICAL; CONTINENTAL GRAIN
	TYPE:M SOURCE:DQ	FOREIGN:	RHONÉ POULENC; MITSUI; AMCOR, LTD.
43	CALIFORNIA BIOTECHNOLOGY INC.	US:2	AMERICAN HOME PRODS-15% '86; COLE, YEAGER
	TYPE:L SOURCE:DQ	FOREIGN:	
44	CALIFORNIA INTEGRATED DIAGNOST	US:1	SYNCOR
	TYPE:SU SOURCE:Q	FOREIGN:	NONE
45	CALZYME LABORATORIES, INC.	US:0	NO INVESTORS
	TYPE:S SOURCE:QL	FOREIGN:	NO INVESTORS
46	CAMBRIDGE BIOSCIENCE CORP.	US:1	JOHNSON & JOHNSON
	TYPE:M SOURCE:Q	FOREIGN:	
47	CENTOCOR	US:1	FMC CORP
	TYPE:L SOURCE:Q	FOREIGN:	
48	CETUS CORPORATION	US:2	AMOCO; CHEVRON
	TYPE:L SOURCE:LQ	FOREIGN:	NONE
49	CHEMICON INTERNATIONAL, INC	US:1	D BECKMAN
	TYPE:S SOURCE:Q	FOREIGN:	
50	CHIRON CORPORATION	US:1	JOHNSON & JOHNSON
	TYPE:L SOURCE:Q	FOREIGN:	NONE CURRENTLY
51	COLLAGEN CORPORATION	US:	MONSANTO-14%
	TYPE:L SOURCE:Q	FOREIGN:	

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COMPANY NAME		INVESTORS	
52	COORS BIOTECH PRODUCTS CO. TYPE:LU SOURCE:Q	US:1 FOREIGN:	ADOLPH COORS - 100%
53	COVALENT TECHNOLOGY CORP. TYPE:S SOURCE:Q	US:0 FOREIGN:	NONE PRESENTLY NONE PRESENTLY
54	CROP GENETICS INTERNATIONAL, NV TYPE:M SOURCE:Q	US: FOREIGN:	
55	CYANOTECH CORPORATION TYPE:M SOURCE:QL	US:1 FOREIGN:	THE CONTINENTAL CORP COSMO OIL CO (JAPAN)
56	CYGNUS RESEARCH CORP. TYPE:S SOURCE:Q	US:0 FOREIGN:	NONE ELF TECHNOLOGIES (ELF AQUATAINE, FRANC
57	DIAGNOS CORP. TYPE:M SOURCE:Q	US:0 FOREIGN:	NONE NONE
58	DIAGNOSTIC PRODUCTS, CORP. TYPE:L SOURCE:QL	US: FOREIGN:	
59	DIAMEDIX, INC. TYPE:M SOURCE:QL	US:0 FOREIGN:	NONE NONE
60	DNAX TYPE:MU SOURCE:Q	US:1 FOREIGN:	SCHERING-PLOUGH WHOLLY OWNS
61	E-Y LABORATORIES, INC TYPE:S SOURCE:Q	US: FOREIGN:	
62	ELECTRO-NUCLEONICS, INC. TYPE:L SOURCE:DQ	US: FOREIGN:	INSURANCE COS; INVESTMENT BANKERS; FUNDS; PHARMACIA A.B.
63	EMBREX, INC. TYPE:S SOURCE:Q	US:1 FOREIGN:	QMERICAN CYANAMID CORP
64	ENDOTRONICS, INC. TYPE:L SOURCE:QL	US:1 FOREIGN:	CELANESE
65	ENZO BIOCHEM, INC. TYPE:L SOURCE:Q	US:1 FOREIGN:	JOHNSON & JOHNSON
66	ENZYME TECHNOLOGY CORP. TYPE:MU SOURCE:Q	US:1 FOREIGN:	GREAT LAKES CHEMICAL CORP.
67	EPITOPE, INC. TYPE:M SOURCE:QL	US:1 FOREIGN:	SYNTEX (USA) INC.
68	EXOVIR, INC. TYPE:S SOURCE:QL	US:0 FOREIGN:	

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	COMPANY NAME	INVESTORS
69	GEN-PROBE, INC. TYPE:M SOURCE:DQ	US:2 HIBRITECH; LILLY FOREIGN:
70	GENENCOR, INC. TYPE:MJV SOURCE:Q	US:3 CORNING; GENENTECH; A.F. STALEY FOREIGN:
71	GENESIS LABS, INC. TYPE:M SOURCE:Q	US:0 NONE FOREIGN: NONE
72	GENETIC DIAGNOSTICS CORP. TYPE:S SOURCE:Q	US: FOREIGN:
73	GENZYME CORP. TYPE:L SOURCE:Q	US:6 COLE YEAGER & WOOD; ALLIANCE CAPITAL; S FOREIGN: ROTHSCHILD BIOTECH FUND; ADVENT INTERN.
74	GLEN MILLS, INC. TYPE:S SOURCE:Q	US:0 NONE FOREIGN: NONE
75	HP GENENCHEM TYPE:MJ SOURCE:QD	US:2 HEWLETT-PACKARD, CO.; GENENTECH, INC. FOREIGN:
76	HYCLONE LABORATORIES TYPE:L SOURCE:Q	US:0 NONE FOREIGN: NONE
77	IGENE BIOTECHNOLOGY INC. TYPE:M SOURCE:LDQ	US: FOREIGN:
78	IMMUCELL CORPORATION TYPE:S SOURCE:Q	US: FOREIGN:
79	IMMUNEX CORP. TYPE:L SOURCE:QL	US:0 NONE FOREIGN: NONE
80	IMMUNO MODULATORS LABS. INC TYPE:M SOURCE:Q	US:1 GRANADA CORP FOREIGN:
81	IMMUNOMED TYPE:S SOURCE:Q	US:2 LAWRENCE VENTURE ASSOC; SEIDMAN JACKSON FOREIGN: IVORY & SIME PLC.
82	IMMUNOMEDICS, INC. TYPE:M SOURCE:Q	US:1 JOHNSON & JOHNSON FOREIGN:
83	IMMUNOTECH CORP. TYPE:S SOURCE:Q	US:0 NONE FOREIGN:
84	INFERGENE COMPANY TYPE:M SOURCE:Q	US: FOREIGN: THE MOLSON COMPANIES (CANADA)
85	INGENE, INC. TYPE:M SOURCE:Q	US:2 BEATRICE CO, INC; ATLANTIC RICHFIELD CO FOREIGN:

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COMPANY NAME		INVESTORS	
86	INTEGRATED CHEMICAL SENSORS TYPE:S SOURCE:Q	US:1 FOREIGN:	EAGLE PROHER CORP
87	INTEGRATED GENETICS, INC. TYPE:L SOURCE:QL	US: FOREIGN:	
88	INTELLI-GENETICS TYPE:M SOURCE:Q	US:2 FOREIGN:	AMOCO=60%; INTELICORP=40%
89	INTER-CELL TECHNOLOGIES, INC. TYPE:S SOURCE:Q	US:0 FOREIGN:	NONE NONE
90	INTERFERON SCIENCES, INC. TYPE:M SOURCE:QD	US:1 FOREIGN:	ANHEUSER-BUSCH CORP
91	INTERN'TL PLANT RESEARCH INST. TYPE:M SOURCE:Q	US:1 FOREIGN:	BIO RAD LABS, INC OWNS 70% OF IPRI
92	JACKSON IMMUNOREASEARCH LAB TYPE:S SOURCE:Q	US:0 FOREIGN:	
93	KALLESTAD LABORATORIES TYPE:L SOURCE:Q	US: FOREIGN:	ERBAMONT, N.V.
94	LIFECODES CORP. TYPE:M SOURCE:Q	US:2 FOREIGN:	NATIONAL DISTILLERS; CHEMICAL CORP
95	LUCKY BIOTECH CORP. TYPE:SU SOURCE:DQ	US: FOREIGN:	SUBSIDIARY OF LUCKY LTD, S. KOREA
96	MARICULTURA, INC. TYPE:S SOURCE:Q	US: FOREIGN:	
97	MELOY LABORATORIES, INC. TYPE:LU SOURCE:Q	US:1 FOREIGN:	WHOLLY OWNED BY RORER GROUP
98	MICROBIO RESOURCES TYPE:M SOURCE:Q	US:3 FOREIGN:	DREXEL; BURNHAM; LAMBERT BRICOMIN
99	MICROGENICS TYPE:M SOURCE:LQ	US:0 FOREIGN:	YAMANOUCHI PHARMACEUTICAL
100	MOLECULAR DIAGNOSTICS, INC. TYPE:M SOURCE:Q	US:0 FOREIGN:	BAYER, A.G.
101	MOLECULAR GENETIC RESOURCES TYPE:S SOURCE:Q	US:0 FOREIGN:	
102	MOLECULAR GENETICS, INC TYPE:L SOURCE:DQ	US:2 FOREIGN:	MARTIN MARIETTA OWNS 17%-82; AMERICAN

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COMPANY NAME		INVESTORS	
103	MONOCLONAL ANTIBODIES, INC.	US:0	
	TYPE:L SOURCE:QL	FOREIGN:	
104	MONOCLONETICS INTERNAT'L, INC.	US:	
	TYPE:S SOURCE:Q	FOREIGN:	
105	MULTIPLE PEPTIDE SYSTEMS INC	US:	
	TYPE:S SOURCE:Q	FOREIGN:	
106	MUREX CORP.	US:1	SYNTEX CORP
	TYPE:L SOURCE:Q	FOREIGN:	
107	MYCOSEARCH, INC.	US:0	
	TYPE:S SOURCE:QL	FOREIGN:	
108	NEORX CORP.	US:1	EASTMAN KODAK
	TYPE:M SOURCE:Q	FOREIGN:	
109	NEUSHUL MARICULTURE	US:1	M & S NEUSHUL
	TYPE:S SOURCE:Q	FOREIGN:	
110	NORTH COAST BIOTECHNOLOGY INC	US:0	
	TYPE:S SOURCE:Q	FOREIGN:	
111	NPI	US:2	MARTIN MARIETTA; MCCORMICK & CO.
	TYPE:L SOURCE:QL	FOREIGN:	SANDOZ;BAT INDUS;ELF AQUATINE;SUMITOMO
112	NYGENE CORP.	US:0	
	TYPE:S SOURCE:Q	FOREIGN:	
113	PHARMATEC, INC	US:0	NONE
	TYPE:M SOURCE:QL	FOREIGN:	
114	PHYTOGEN	US:1	JG BOSWELL CO
	TYPE:S SOURCE:Q	FOREIGN:	CIBA-GEIGY CORP
115	PLANT GENETICS, INC.	US:1	MCCORMICK CORP
	TYPE:M SOURCE:Q	FOREIGN:	KIRIN BREWERY LTD; TWYFORD SEED LTD.
116	QUEUE SYSTEMS INC	US:0	
	TYPE:M SOURCE:Q	FOREIGN:	
117	QUIDEL	US:1	BECTON DICKINSON
	TYPE:L SOURCE:Q	FOREIGN:	DIA TEK
118	R & A PLANT/SOIL INC.	US:	
	TYPE:S SOURCE:Q	FOREIGN:	
119	RECOMTEX CORP.	US:0	
	TYPE:S SOURCE:Q	FOREIGN:	

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	COMPANY NAME	INVESTORS
120	RIBI IMMUNOCHEM RESEARCH, INC. TYPE:M SOURCE:Q	US:1 EXECUTIVE LIFE INS CO FOREIGN:
121	RICERCA, INC TYPE:LU SOURCE:DQ	US: FOREIGN:
122	SEPRACOR, INC. TYPE:M SOURCE:Q	US:2 AMERICAN CYANAMID CO; ALCOA CO FOREIGN:
123	STRATAGENE CLONING SYSTEMS TYPE:M SOURCE:Q	US: FOREIGN:
124	SYNBIOTICS CORP. TYPE:M SOURCE:Q	US:0 FOREIGN:
125	SYNTRO CORP. TYPE:M SOURCE:Q	US:2 CPC INTERNATIONAL; LUBRIZOL FOREIGN: SHIN-ETSU; NIHON C???T; NIPPON OIL & FAT
126	SYVA CO TYPE:LU SOURCE:Q	US:1 SYNTEX FOREIGN:
127	T-CELL SCIENCES TYPE:M SOURCE:QL	US:2 SYNTEX; AETNA LIFE & CASUALTY; SEE PROXY FOREIGN:
128	TRANSFORMATION RESEARCH INC. TYPE:S SOURCE:Q	US: FOREIGN:
129	TRITON BIOSCIENCES, INC. TYPE:LU SOURCE:QL	US:1 SHELL OIL CO FOREIGN:
130	UNIGENE LABORATORIES, INC. TYPE:M SOURCE:QL	US:1 ERBAMONT FOREIGN: SIGMA TAU, ITALY
131	UNITED AGRISEEDS INC TYPE:L SOURCE:Q	US:1 GENETICS INSTITUTE FOREIGN:
132	UNIVERSITY GENETICS CO. TYPE:M SOURCE:Q	US:0 NONE FOREIGN:
133	VERAX CORP. TYPE:M SOURCE:Q	US:3 ELI LILLY; COMBUSTION ENGINEERING; GENENT. FOREIGN: PHARMACIA
134	WESTBRIDGE RESEARCH GROUP TYPE:S SOURCE:Q	US:0 FOREIGN:
135	ZOECON CORP. (SANDOZ CROP PRO) TYPE:LU SOURCE:QL	US: FOREIGN: WHOLLY OWNED SUB OF SANDOZ PHARMACEUTI.
136	ZYMED LABORATORIES, INC. TYPE:S SOURCE:Q	US: FOREIGN:

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COMPANY NAME	INVESTORS
137 ZYMOGENETICS, INC. TYPE:M SOURCE:QOD	US:1 CABLE&HOWSE-VENTURE CAPITAL FOREIGN: NOVO INDUSTRI, SWEDEN; EISAI CO., LTD, JA

V-E is a listing of equity holders for the primary classifications A, B, G, J, K and P.

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	COMPANY NAME	INVESTORS
A	DIAGNON CORP. TYPE:M SOURCE:Q	US:0 NONE FOREIGN: NONE
A	EMBREX, INC. TYPE:S SOURCE:Q	US:1 QMERICAN CYANAMID CORP FOREIGN:
A	IMMUCELL CORPORATION TYPE:S SOURCE:Q	US: FOREIGN:
A	MOLECULAR GENETICS, INC TYPE:L SOURCE:DQ	US:2 MARTIN MARIETTA OWNS 17%- '82; AMERICAN FOREIGN:
A	SYNTRO CORP. TYPE:M SOURCE:Q	US:2 CPC INTERNATIONAL; LUBRIZOL FOREIGN: SHIN-ETSU; NIHON C???T; NIPPON OIL & FAT
A	UNIVERSITY GENETICS CO. TYPE:M SOURCE:Q	US:0 NONE FOREIGN:
B	AGDIA, INC. TYPE:S SOURCE:DQ	US:0 NONE FOREIGN:
B	AGRACETUS TYPE:MJV SOURCE:QL	US:2 CETUS MADISON CORP; GRACE ASC CORP FOREIGN:
B	BENTECH LABORATORIES TYPE:S SOURCE:Q	US: FOREIGN:
B	BIOTECHNICA INTERNATIONAL TYPE:L SOURCE:QL	US: FOREIGN: SEAGRAM CO. LTD (CANADA)
B	CALGENE, INC. TYPE:M SOURCE:DQ	US:2 ALLIED CHEMICAL; CONTINENTAL GRAIN FOREIGN: RHONE POULENC; MITSUI; AMCOR, LTD.
B	CROP GENETICS INTERNATIONAL, NV TYPE:M SOURCE:Q	US: FOREIGN:
B	INTERN'TL PLANT RESEARCH INST. TYPE:M SOURCE:Q	US:1 BIO RAD LABS, INC OWNS 70% OF IPRI FOREIGN:
B	NPI TYPE:L SOURCE:QL	US:2 MARTIN MARIETTA; MCCORMICK & CO. FOREIGN: SANDOZ; BAT INDUS; ELF AQUATINE; SUMITOMO
B	PHYTOGEN TYPE:S SOURCE:Q	US:1 JG BOSWELL CO FOREIGN: CIBA-GEIGY CORP
B	PLANT GENETICS, INC. TYPE:M SOURCE:Q	US:1 MCCORMICK CORP FOREIGN: KIRIN BREWERY LTD; TWYFORD SEED LTD.
B	SEPRACOR, INC.	US:2 AMERICAN CYANAMID CO; ALCOA CO

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COMPANY NAME		INVESTORS	
TYPE:M	SOURCE:Q	FOREIGN:	
B	UNITED AGRISEEDS INC	US:1	GENETICS INSTITUTE
TYPE:L	SOURCE:Q	FOREIGN:	
B	ZOECON CORP.(SANDOZ CROP PRO)	US:	
TYPE:LU	SOURCE:QL	FOREIGN:	WHOLLY OWNED SUB OF SANDOZ PHARMACEUTI
G	ADVANCED BIOTECHNOLOGIES	US:0	NONE
TYPE:S	SOURCE:Q	FOREIGN:	NONE
G	CHEMICON INTERNATIONAL, INC	US:1	D BECKMAN
TYPE:S	SOURCE:Q	FOREIGN:	
G	DIAGNOSTIC PRODUCTS, CORP.	US:	
TYPE:L	SOURCE:QL	FOREIGN:	
G	EPITOPE, INC.	US:1	SYNTEX(USA) INC.
TYPE:M	SOURCE:QL	FOREIGN:	
G	JACKSON IMMUNORESEARCH LAB	US:0	
TYPE:S	SOURCE:Q	FOREIGN:	
G	MOLECULAR GENETIC RESOURCES	US:0	
TYPE:S	SOURCE:Q	FOREIGN:	
G	MONOCLONETICS INTERNAT'L, INC.	US:	
TYPE:S	SOURCE:Q	FOREIGN:	
G	STRATAGENE CLONING SYSTEMS	US:	
TYPE:M	SOURCE:Q	FOREIGN:	
G	ZYMED LABORATORIES, INC.	US:	
TYPE:S	SOURCE:Q	FOREIGN:	
J	BIOMEDICAL TECHNOLOGIES	US:	NA
TYPE:S	SOURCE:Q	FOREIGN:	
J	BIOSCIENCE MANAGEMENT INC.	US:0	NONE
TYPE:S	SOURCE:QL	FOREIGN:	NONE
J	CALZYME LABORATORIES, INC.	US:0	NO INVESTORS
TYPE:S	SOURCE:QL	FOREIGN:	NO INVESTORS
J	GENENCOR, INC.	US:3	CORNING; GENENTECH; A.F. STALEY
TYPE:MJV	SOURCE:Q	FOREIGN:	
J	MICROBIO RESOURCES	US:3	DREXEL; BURNHAM; LAMBERT
TYPE:M	SOURCE:Q	FOREIGN:	BRICOMIN

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	COMPANY NAME	INVESTORS
J	WESTBRIDGE RESEARCH GROUP TYPE:S SOURCE:Q	US:0 FOREIGN:
K	ADVANCED MAGNETICS, INC. TYPE:M SOURCE:QD	US: FOREIGN:
K	AGRI-DIAGNOSTICS ASSOCIATES TYPE:SJ SOURCE:QL	US:2 KOPPERS CO=60%, DNAP=40% FOREIGN:
K	AGRITECH SYSTEMS, INC TYPE:M SOURCE:Q	US: FOREIGN: VARIOUS EUROPEAN
K	AMERICAN DIAGNOSTICA, INC. TYPE:S SOURCE:Q	US: FOREIGN:
K	ANGENICS TYPE:M SOURCE:Q	US:0 NONE FOREIGN: NONE
K	ANTIVIRALS, INC TYPE:S SOURCE:QL	US:1 DUPONT FOREIGN:
K	BINAX, INC TYPE:S SOURCE:QL	US:0 NONE FOREIGN: NONE
K	BIOGENEX LABORATORIES TYPE:M SOURCE:Q	US: FOREIGN:
K	BIOSTAR MEDICAL PRODUCTS, INC. TYPE:M SOURCE:Q	US: FOREIGN: SKANDIGEN A.B., SWEDEN; KEMA NOBEL A.B. (
K	CALIFORNIA INTEGRATED DIAGNOST TYPE:SU SOURCE:Q	US:1 SYNCOR FOREIGN: NONE
K	CAMBRIDGE BIOSCIENCE CORP. TYPE:M SOURCE:Q	US:1 JOHNSON & JOHNSON FOREIGN:
K	COVALENT TECHNOLOGY CORP. TYPE:S SOURCE:Q	US:0 NONE PRESENTLY FOREIGN: NONE PRESENTLY
K	DIAMEDIX, INC. TYPE:M SOURCE:QL	US:0 NONE FOREIGN: NONE
K	ELECTRO-NUCLEONICS, INC. TYPE:L SOURCE:DQ	US: INSURANCE COS; INVESTMENT BANKERS; FUNDS; FOREIGN: PHARMACIA A.B.
K	ENZO BIOCHEM, INC. TYPE:L SOURCE:Q	US:1 JOHNSON & JOHNSON FOREIGN:
K	GEN-PROBE, INC. TYPE:M SOURCE:DQ	US:2 HIBRITECH; LILLY FOREIGN:

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COMPANY NAME		INVESTORS	
K	GENESIS LABS, INC. TYPE:M SOURCE:Q	US:0 NONE FOREIGN: NONE	
K	GENETIC DIAGNOSTICS CORP. TYPE:S SOURCE:Q	US: FOREIGN:	
K	IMMUNOTECH CORP. TYPE:S SOURCE:Q	US:0 NONE FOREIGN:	
K	KALLESTAD LABORATORIES TYPE:L SOURCE:Q	US: FOREIGN: ERBAMONT, N.V.	
K	LIFECODES CORP. TYPE:M SOURCE:Q	US:2 NATIONAL DISTILLERS; CHEMICAL CORP FOREIGN:	
K	MICROGENICS TYPE:M SOURCE:LQ	US:0 FOREIGN: YAMANOUCHI PHARMACEUTICAL	
K	MOLECULAR DIAGNOSTICS, INC. TYPE:M SOURCE:Q	US:0 FOREIGN: BAYER, A.G.	
K	MONOCLONAL ANTIBODIES, INC. TYPE:L SOURCE:QL	US:0 FOREIGN:	
K	MUREX CORP. TYPE:L SOURCE:Q	US:1 SYNTEX CORP FOREIGN:	
K	RECOMTEX CORP. TYPE:S SOURCE:Q	US:0 FOREIGN:	
K	SYNBIOTICS CORP. TYPE:M SOURCE:Q	US:0 FOREIGN:	
K	SYVA CO TYPE:LU SOURCE:Q	US:1 SYNTEX FOREIGN:	
P	ALPHA I BIOMEDICALS TYPE:S SOURCE:QL	US: FOREIGN:	
P	AMERICAN BIOTECHNOLOGY CO TYPE:S SOURCE:Q	US:1 COOPER BIOMEDICAL INC-\$300,000 1985-86 FOREIGN:	
P	AMERICAN LABORATORIES, INC TYPE:M SOURCE:Q	US:0 NONE FOREIGN: NONE	
P	AMGEN TYPE:L SOURCE:Q	US:2 ABBOTT LABS; SMITHKLINE BECKMAN FOREIGN: KIRIN BREWERY CO.,LTD	
P	AUTOMEDIX SCIENCES, INC	US:0	

NCBC BUSINESS STUDIES PROGRAM - COMPANIES DATABASE
EQUITY OWNERSHIP IN US BIOTECHNOLOGY COMPANIES
EQUITY SORTED BY US COMPANY NAME
CLASSIFICATIONS A,B,G,J,K,P

MAY 1 87

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COMPANY NAME		INVESTORS	
TYPE:S	SOURCE:Q	FOREIGN:	
P	BIOGEN	US:1	SCHERING-PLOUGH,
	TYPE:L	SOURCE:Q	FOREIGN: INCO
P	BIOTHERAPEUTICS, INC.	US:0	NONE
	TYPE:L	SOURCE:QL	FOREIGN: NONE
P	CALIFORNIA BIOTECHNOLOGY INC.	US:2	AMERICAN HOME PRODS-15%'86; COLE, YEAGER
	TYPE:L	SOURCE:DQ	FOREIGN:
P	CENTOCOR	US:1	FMC CORP
	TYPE:L	SOURCE:Q	FOREIGN:
P	CETUS CORPORATION	US:2	AMOCO; CHEVRON
	TYPE:L	SOURCE:LQ	FOREIGN: NONE
P	CHIRON CORPORATION	US:1	JOHNSON & JOHNSON
	TYPE:L	SOURCE:Q	FOREIGN: NONE CURRENTLY
P	DNAX	US:1	SCHERING-PLOUGH WHOLLY OWNS
	TYPE:MU	SOURCE:Q	FOREIGN:
P	EXO VIR, INC.	US:0	
	TYPE:S	SOURCE:QL	FOREIGN:
P	GENZYME CORP.	US:6	COLE YEAGER & WOOD; ALLIANCE CAPITAL; S
	TYPE:L	SOURCE:Q	FOREIGN: ROTHSCHILD BIOTECH FUND; ADVENT INTERN.
P	IMMUNEX CORP.	US:0	NONE
	TYPE:L	SOURCE:QL	FOREIGN: NONE
P	IMMUNO MODULATORS LABS. INC	US:1	GRANADA CORP
	TYPE:M	SOURCE:Q	FOREIGN:
P	IMMUNOMEDICS, INC.	US:1	JOHNSON & JOHNSON
	TYPE:M	SOURCE:Q	FOREIGN:
P	INGENE, INC.	US:2	BEATRICE CO, INC; ATLANTIC RICHFIELD CO
	TYPE:M	SOURCE:Q	FOREIGN:
P	INTEGRATED GENETICS, INC.	US:	
	TYPE:L	SOURCE:QL	FOREIGN:
P	INTERFERON SCIENCES, INC.	US:1	ANHEUSER-BUSCH CORP
	TYPE:M	SOURCE:QD	FOREIGN:
P	LUCKY BIOTECH CORP.	US:	
	TYPE:SU	SOURCE:DQ	FOREIGN: SUBSIDIARY OF LUCKY LTD, S. KOREA

NCBC BUSINESS STUDIES PROGRAM - COMPANIES DATABASE
EQUITY OWNERSHIP IN US BIOTECHNOLOGY COMPANIES
EQUITY SORTED BY US COMPANY NAME
CLASSIFICATIONS A,B,G,J,K,P

MAY 1 87

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	COMPANY NAME	INVESTORS
P	NEORX CORP. TYPE:M SOURCE:Q	US:1 EASTMAN KODAK FOREIGN:
P	NORTH COAST BIOTECHNOLOGY INC TYPE:S SOURCE:Q	US:0 FOREIGN:
P	PHARMATEC, INC TYPE:M SOURCE:QL	US:0 NONE FOREIGN:
P	QUIDEL TYPE:L SOURCE:Q	US:1 BECTON DICKINSON FOREIGN: DIATEK
P	RIBI IMMUNOCHEM RESEARCH, INC. TYPE:M SOURCE:Q	US:1 EXECUTIVE LIFE INS CO FOREIGN:
P	T-CELL SCIENCES TYPE:M SOURCE:QL	US:2 SYNTEX;AETNA LIFE & CASUALY; SEE PROXY FOREIGN:
P	TRITON BIOSCIENCES, INC. TYPE:LU SOURCE:QL	US:1 SHELL OIL CO FOREIGN:
P	UNIGENE LABORATORIES, INC. TYPE:M SOURCE:QL	US:1 ERBAMONT FOREIGN: SIGMA TAU, ITALY
P	ZYMOGENETICS, INC. TYPE:M SOURCE:QD	US:1 CABLE&HOWSE-VENTURE CAPITAL FOREIGN: NOVO INDUSTRI,SWEDEN; EISAI CO.,LTD,JA

V-F is a table of equity financing of companies. Three-quarters of the responding companies had equity purchased, mostly by U.S. firms. A breakdown of the number of companies and their equity purchase mix is presented in the bottom half of the table.

EQUITY FINANCING OF BIOTECHNOLOGY COMPANIES:

OF 124 TOTAL RESPONDANTS:

	No.	%
NO EQUITY PURCHASED IN COMPANY	29	24%
U.S. EQUITY PURCHASER ONLY	60	48%
FOREIGN EQUITY PURCHASER ONLY	16	13%
BOTH U.S. AND FOREIGN EQUITY HOLDERS	19	15%

THIS BROKE DOWN FURTHER TO:

Equity Holders	Number of companies
NONE	28
US-1	46
US-2	12
US-3	1
US-4+	1
FOR.-1	12
FOR.-2	3
FOR.-3	1
US1;FOR1	5
US2;FOR1	4
US3;FOR1	4
US1;FOR2	2
US3;FOR2	1
US2;FOR3	2
US2;FOR4+	1

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V-G is a table of equity held in biotechnology companies, broken down by the size of the biotech company. Note that large companies were less likely to have no equity holders than medium or small companies. Small companies were less likely to have more than one equity holder than medium or large companies.

**EQUITY PURCHASED IN U.S. BIOTECHNOLOGY COMPANIES
EXAMINED BY COMPANY SIZE**

	COMPANY SIZE			
	SMALL	MED	LARGE	TOTAL
NO EQUITY HELD	17	9	3	29
ONE EQUITY HOLDER	14	27	17	58
MORE THAN ONE	4	19	14	37
				124 TOTAL

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V-H is a figure of primary source of funding for U.S. biotechnology companies in their first year vs. the present source. Primary source was considered to be the source of over 50% of the funding. (See Table V-J for values)

Legend:

VC= Venture Capital

PRIV.=Private Investment

EQ.US=Equity, U.S.

EQ.FOR= Equity, Foreign

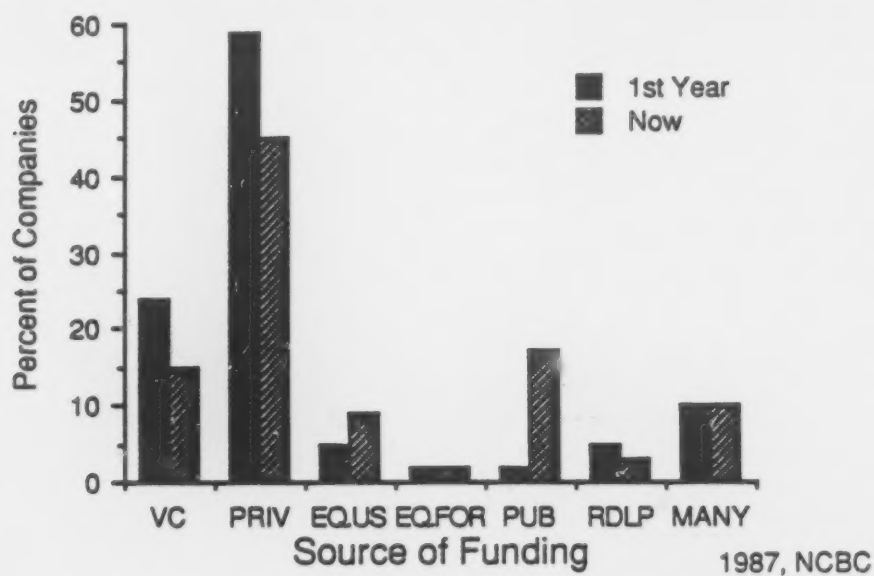
PUB=Public Stock Offering

RDLP=Research and Development Limited Partnership

MANY=More than one source of funding, none over 50%

Note the decrease in percent of firms with private investment and increase in public financing between the first year (the average firm was founded in 1981) and the present.

PRIMARY SOURCE OF FUNDING FOR US BIOTECH COMPANIES



V-I is a table of the primary source of funding from the 110 companies that responded to this question in full. The most used form of funding was for private investment. The least used form was RDLP as a primary source.

V-J is a table of percent of total companies using each type of financing in their first year and at present. (See Figure V-H).

PRIMARY SOURCE OF FUNDING FOR BIOTECHNOLOGY COMPANIES

<u>SOURCE OF FUNDING</u>	<u>NO. OF COMPANIES</u>	<u>PERCENT OF TOTAL</u>
VENTURE CAPITAL	16	15%
PRIVATE INVESTMENT	49	45%
EQUITY-US	10	9%
EQUITY-FOREIGN	2	2%
PUBLIC STOCK OFFERING	19	17%
RDLP	3	3%
MULTIPLE SOURCES OF FUNDING	11	10%

DATA ARE CURRENT (EARLY 1987). A TOTAL OF 110 COMPANIES RESPONDED TO THIS QUESTION; NO ANSWER FROM 27 COMPANIES.

A PRIMARY SOURCE OF FUNDING WAS THAT MARKED 50% OR MORE.

29 OF THE RESPONDING COMPANIES WERE PUBLIC CORPORATIONS; 20 OF THESE HAD OVER 50% FINANCING FROM THE STOCK OFFERINGS.

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**PRIMARY SOURCE OF FUNDING FOR BIOTECHNOLOGY COMPANIES
IN FIRST YEAR AND NOW**

PRIMARY SOURCE OF FUNDING	FIRST YEAR PERCENT OF TOTAL	CURRENTLY PERCENT OF TOTAL
VENTURE CAPITAL	24%	15%
PRIVATE INVESTMENT	59%	45%
EQUITY-US	5%	9%
EQUITY-FOREIGN	2%	2%
PUBLIC STOCK OFFERING	2%	17%
RDLF	5%	3%
MULTIPLE SOURCES OF FUNDING	10%	10%

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THESE DATA REPRESENT ANSWERS FROM 119 COMPANIES FOR THE FIRST YEAR AND 110 COMPANIES FOR THE CURRENT YEAR (OF 137 COMPANIES WITH COMPLETED QUESTIONNAIRES). A PRIMARY SOURCE IS WHERE MORE THAN 50% OF TOTAL FUNDING COMES FROM THAT SOURCE. WHERE NO MORE THAN 50% OF TOTAL FUNDING CAME FROM A SINGLE SOURCE, THE MULTIPLE SOURCES OF FUNDING CATEGORY WAS MARKED. PERCENTS TOTAL 101% DUE TO ROUNDING OFF OF DATA.

V-K is a table of primary source of funding for the six key company primary classifications. The total number of companies that completed this question is indicated in parentheses.

Table:

Primary Source of Funding of Biotechnology Companies, By Primary Classification

Classification	Number of Companies with Prim Funding By:					
	Vent Cap	Priv Inv.	Eq-US	Eq-For	Pub Stock	RDLP
A-Animal Agriculture(5)	1	1	1	0	2	0
B-Plant Agriculture(10)	3	5	1	0	1	0
G-Reagents(9)	0	7	0	0	2	0
J-Specialty Chemicals(5)	0	4	0	0	0	1
K-Human Diagnostics(24)	5	10	3	0	4	2
P-Therapeutics	1	8	5	2	10	0

The number of companies responding to this question in each category appears in parentheses.

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SECTION VI Financial Information on Biotechnology Companies

VI-A is a listing of compiled data from biotechnology companies that answered these questions in the survey. These are average data: a. Over all companies; b. for Private, Public, and Subsidiary Companies; c. for Small, Medium and Large Companies; and d. for companies in the six major primary classifications.

The average data and the range are given.

The following data are presented (reading across the top)

- a. Total present financing in \$millions
- b. Expected revenues for current fiscal year, in \$millions
- c. The percent of revenues that are from biotechnology
- d. The revenues from biotechnology ($b \times c$)
- e. The percent of revenues that are from interest
- f. The R and D budget in \$thousands
- g. The percent of the R and D budget for biotechnology
- h. The amount of the R and D budget that is for biotechnology ($f \times g$)
- i. The R and D budget as a percent of total financing (f/a)
- j. The R and D budget as a percent of expected revenues (f/b)
- k. The R and D budget per employee in \$thousands
- l. The expected revenues per employee in \$thousands

Company Name fin. empl. class size finan. exp.revs. %BT REVS FROM BT %int R&Dbud. %BT BUDGET --BT(\$M) BUDGET/ R&Dbud/ RD BUD/ EX REV/ TOT FIN% EX.REVS.% EMPL.(\$M) EMPL.(\$M)

SUM: 1746.1 1017.629 92 cos 104 cos SUM 428726

NOTE: 99=100%

FINANCIAL/BUDGET/REVENUE DATA

COMPANIES SORTED BY PRIVATE/PUBLIC/SUBSIDIARY

finan. exp.revs. %BT	REVS FROM BT	%int R&Dbud.	%BT	BUDGET --BT(\$M)	BUDGET/ R&Dbud/ RD BUD/ EX REV/ TOT FIN% EX.REVS.% EMPL.(\$M) EMPL.(\$M)
74213 3.24 89.43 2.48 5 1502.75 86.31 1311.81 67.64 89.10 37.42 91.81					
0.01 0.08 5.00 0.07 0 10.00 5.00 9.90 2.78 1.33 0.50 6.15					
40 33.60 99.00 14.85 99 10000.00 99.00 9900.00 1500.00 1750.00 107.69 222.22					
38.0 16.12 72.53 9.95 13 6907.05 90.74 7100.98 26.63 58.27 50.89 108.14					
0.05 0.18 2.00 1.00 0 12.00 2.00 11.88 2.22 4.00 0.08 1.16					
320 123.00 99.00 40.00 40 45000.00 99.00 44550.00 133.33 185.19 172.84 880.00					
18.08 28.76 77.38 2.35 0 9222.22 75.73 5646.67 60.13 230.34 106.20 178.35					
1 0.40 10.00 0.40 0 1000.00 10.00 100.00 20.59 6.76 11.76 8.13					
69 100.00 99.00 5.55 0 31000.00 99.00 26350.00 100.00 1033.33 375.00 769.23					

FINANCIAL/REVENUE/BUDGET DATA: SORT BY COMPANY SIZE

finan. exp.revs. %BT	REVS FROM BT	%int R&Dbud.	%BT	BUDGET --BT(\$M)	BUDGET/ R&Dbud/ RD BUD/ EX REV/ TOT FIN% EX.REVS.% EMPL.(\$M) EMPL.(\$M)
2.86 0.94 90.69 0.92 3 414.26 85.78 305.05 101.00 65.52 47.06 88.31					
0.01 0.08 5.00 0.07 0 10.00 5.00 9.90 2.78 1.33 0.50 8.33					
21.00 3.00 99.00 2.97 16 1500.00 99.00 1485.00 1500.00 250.00 375.00 225.00					
8.14 3.13 85.87 2.28 7 1768.35 85.96 1649.11 55.64 85.07 43.82 93.14					
0.05 0.30 2.00 0.30 0 200.00 2.00 40.00 2.22 4.00 2.00 6.15					
40.00 22.00 99.00 9.90 99 14000.00 99.00 13860.00 100.00 1750.00 172.84 880.00					
54.45 28.04 72.12 13.31 10 10479.89 87.18 9232.95 33.26 99.22 47.55 112.77					
3.00 2.00 10.00 1.00 0 287.00 10.00 284.13 4.55 2.96 2.68 8.13					
320.00 123.00 99.00 40.00 36 45000.00 99.00 44550.00 133.33 1033.33 221.43 769.23					

Company Name	fin. empl.	class size	finan. (MM)	exp.revs. (\$MM)	%BT	REVS FROM BT	%Int R&Dbud. \$M	%BT	BUDGET --BT(\$M)	BUDGET/ TOT FIN%	R&DBUD/ EX.REVS.%	RD BUD/ EMPL.(\$M)	EX REV/ EMPL.(\$M)	
FINANCIAL/BUDGET/REVENUE DATA: SORT BY AREA OF COMPANY INTEREST														
NO. OF COS.														
ANIMAL AGRICULTURE--A	6	AVERAGE	18.21	5.20	90.80	4.49	9	2083.33	80.17	1855.83	13.86	38.06	37.44	77.47
		LO	3.5	2.50	75.00	2.48	0	200.00	15.00	180.00	2.22	4.00	2.00	42.86
		HIGH	36	9.50	99.00	7.13	25	5000.00	99.00	4950.00	34.29	75.00	70.59	147.06
PLANT AGRICULTURE--B	8	AVERAGE	15.13	16.68	66.43	3.11	11	4649.09	81.58	3318.96	19.41	214.71	49.94	129.22
		LO	0.05	0.40	15.00	0.50	0	40.00	35.00	39.60	5.00	5.33	5.71	6.15
		HIGH	45	100.00	99.00	6.60	99	13000.00	99.00	7425.00	38.46	1750.00	107.69	769.23
REAGENTS-G	3	AVERAGE	6.33	6.09	91.13	5.81	3	1300.00	97.50	1278.00	19.52	35.83	34.66	115.79
		LO	1	0.30	55.00	0.30	0	50.00	90.00	49.50	5.00	3.33	3.13	60.00
		HIGH	14	36.00	99.00	35.28	10	5400.00	99.00	5346.00	38.57	125.00	100.00	187.50
SPECIALTY CHEMICALS--J	3	AVERAGE	19	3.50	80.20	3.47	4	3583.33	89.25	3482.50	11.34	58.93	43.16	117.08
		LO	8	0.60	5.00	0.59	0	250.00	60.00	247.50	2.78	17.86	12.82	75.00
		HIGH	40	10.00	99.00	9.90	8	10000.00	99.00	9900.00	25.00	100.00	100.00	200.00
DIAGNOSTICS, HUMAN--K	19	AVERAGE	13.10	14.50	83.45	4.57	5	2801.00	81.57	1535.33	32.30	58.65	38.00	92.71
		LO	0.4	0.20	25.00	0.20	0	120.00	10.00	118.80	4.55	9.23	8.00	16.67
		HIGH	55	123.00	99.00	30.75	23	20000.00	99.00	4087.50	100.00	250.00	116.67	222.22
THERAPEUTICS--P	28	AVERAGE	38.55	11.76	85.96	9.54	14	8506.00	94.14	8222.22	39.80	122.36	79.37	86.43
		LO	0.05	0.90	50.00	0.89	0	50.00	40.00	49.50	9.72	25.00	15.38	21.43
		HIGH	320	50.00	99.00	40.00	40	45000.00	99.00	44550.00	163.00	1033.33	375.00	225.00

VI-B is a table of mean current financing of biotechnology companies broken down into categories.

VI-C ,which follows, is a figure of the same data.

CURRENT FINANCING OF BIOTECHNOLOGY COMPANIES

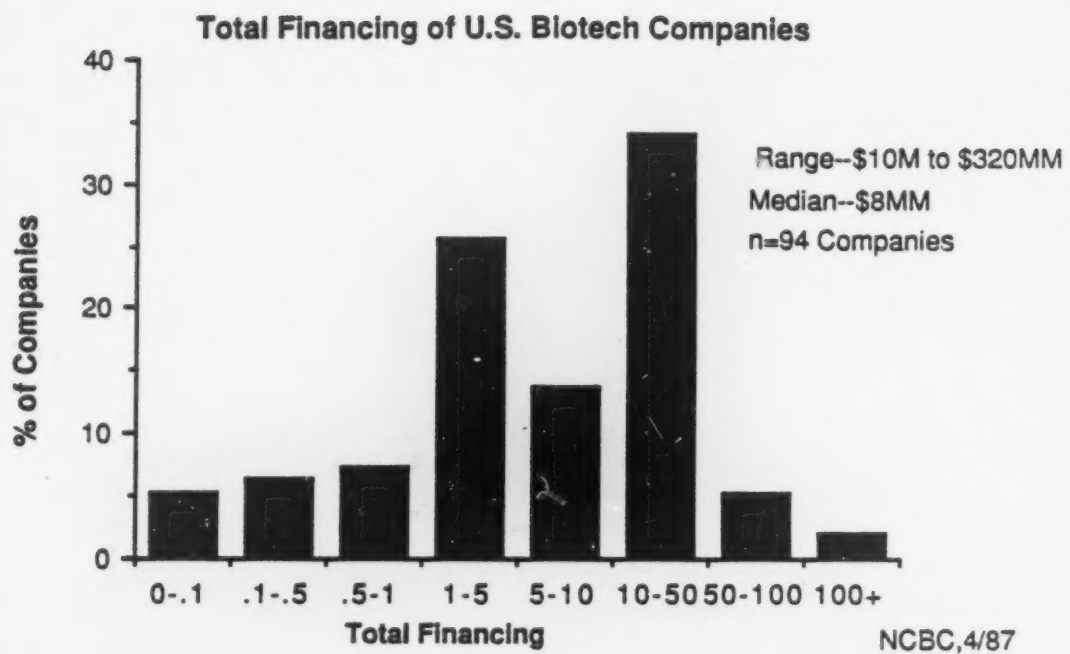
(Data from 94 companies answering questionnaire)

<u>Current Financing (\$MM)</u>	<u>% of Companies</u>
0 to 0.1	5.3
0.1 to 0.5	6.4
0.5 to 1	7.4
1 to 5	25.5
5 to 10	13.8
10 to 50	34.0
50 to 100	5.3
100 plus	2.1

The range of values is \$10M to \$320MM

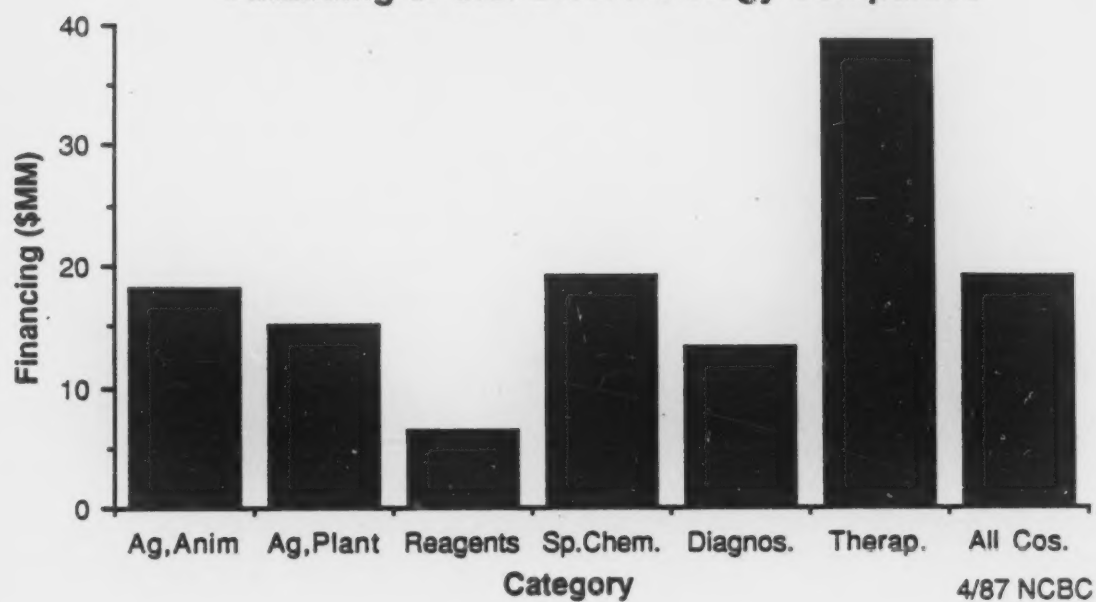
The median value is \$8MM

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VI-D is a figure of the mean amount of financing in the top six categories and compared with the mean value for all companies.

Financing of U.S. Biotechnology Companies



VI-E is a table of the percent of companies with the indicated mean expected revenues for the current fiscal year. The median and range of values is presented.

VI-F, which follows, is a figure of the same data.

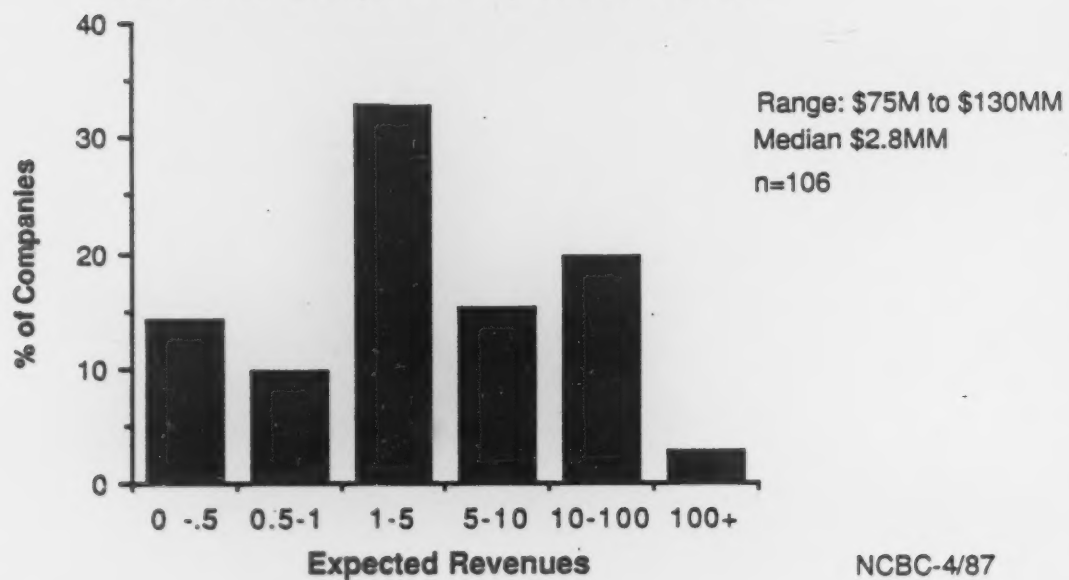
EXPECTED REVENUES OF BIOTECHNOLOGY COMPANIES
(data are from 106 companies returning questionnaires)

<u>Expected Revenues (\$MM)</u>	<u>% of Companies</u>
0 to 0.5	14.2
0.5 to 1	9.8
1 to 5	32.9
5 to 10	15.1
10 to 100	19.6
100 plus	2.7

Range is \$75M to \$130MM
Median is \$2.8MM

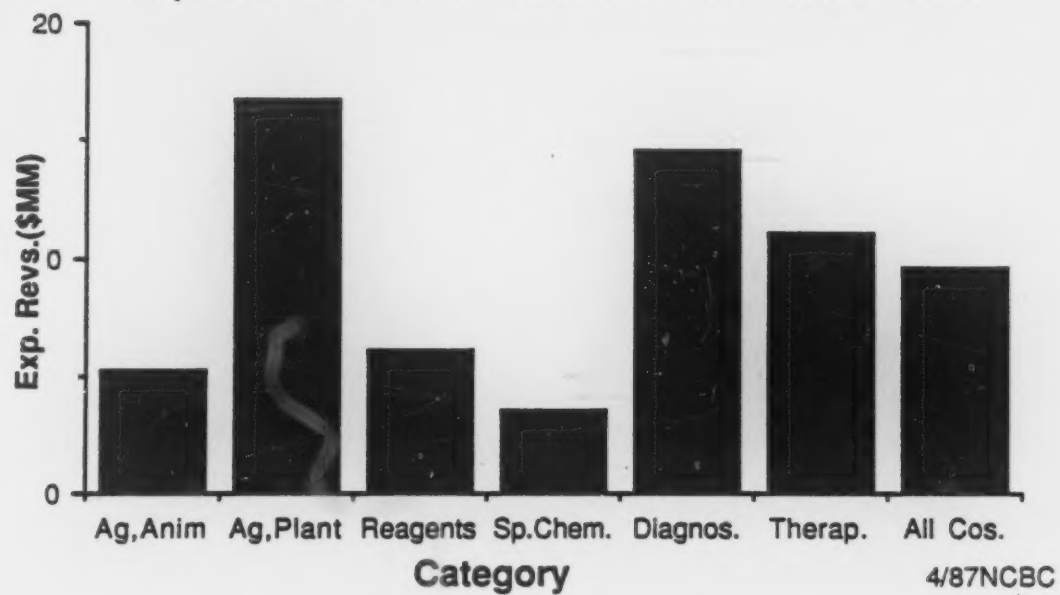
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U.S. Biotech Companies—Expected Revenues



VI-G is a figure of mean expected revenues for the six top primary classification categories (as defined by OTA) and a comparison with all company data.

Expected Current Revenues for U.S. Biotech Cos.



VI-H is a table of mean expected revenues and mean expected revenues per employee broken down by company financing, company size, and area of interest.

Table VI-H: Expected Revenues of U.S. Biotechnology Companies

<u>Classification</u>	<u>Expected Revenues (\$MM)</u>	<u>per employee (\$M)</u>
All Companies	9.8	99.0
Private Companies	3.2	81.8
Public Companies	16.1	108.1
Subsidiary Companies	28.8	178.3
Small Companies (2-20 empl.)	0.9	88.3
Medium Companies (21-100)	3.1	93.1
Large Companies (101-1000)	28.0	112.8
<u>Primary Classification:</u>		
A- Animal Agriculture	5.2	77.5
B- Plant Agriculture	16.7	129.2
G- Reagents	6.1	115.8
J- Specialty Chemicals	3.5	117.1
K- Human Diagnostics	14.5	92.7
P- Therapeutics	11.8	86.4

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The mean expected revenues (\$MM) and expected revenues per employee (\$M) are given for the current fiscal year. Data were from 104 companies that answered this question.

VI-I is a table of the percent of companies with the indicated R and D budgets. The median value and range are also given.

VI-J, which follows, is a figure of the same data.

R & D BUDGET OF BIOTECHNOLOGY COMPANIES

Data is from 108 companies returning questionnaire

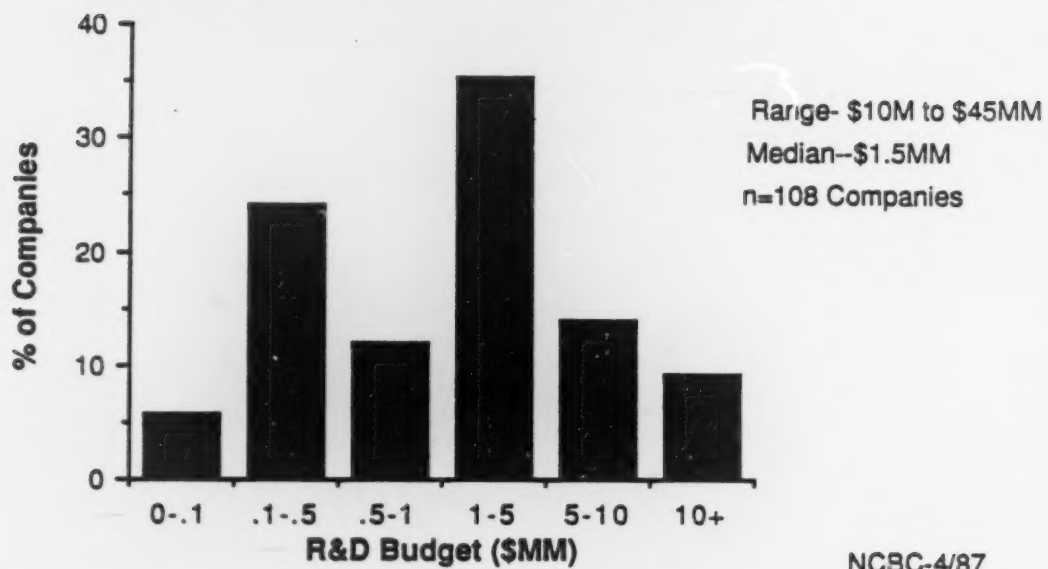
<u>BUDGET (\$M)</u>	<u>% OF COMPANIES</u>
0 TO 100	5.6
100 to 500	24.1
500 to 1000	12.0
1000 to 5000	35.2
5000 to 10,000	13.9
10,000 plus	9.3

The range was \$10M to \$45MM

The median was \$1.5MM

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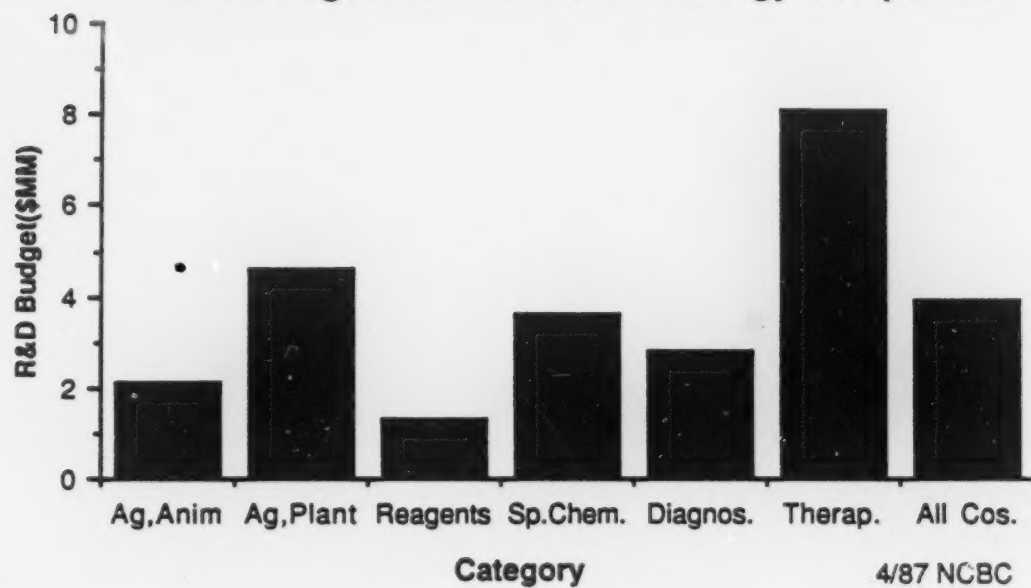
R & D Budget of U.S. Biotech Companies



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VI-K is a figure of mean R and D budget for companies in the top six categories,
compared to data from all companies (108 companies)

R & D Budgets for U.S. Biotechnology Companies



VI-L is a table of mean R and D budgets, broken down by company size, financing, and interest. Also shown are R and D budget as a percent of total financing and as a percent of total expected current annual revenues. Lastly, the R and D budget per employee is also given.

Table VI-L: U.S. Biotechnology Companies and their R & D Budget

<u>Classification</u>	<u>R&D Budget (\$M)</u>	<u>R&D Budget as a percent of:</u>		<u>R&D budget/employee (\$M)</u>
		<u>tot. finan.</u>	<u>revenues</u>	
All Companies	4045	52.3	91.8	48.0
Private Companies	1502	67.6	89.1	37.4
Public Companies	6709	26.6	56.5	50.9
Subsidiary Companies	9222	60.1	230.3	106.2
Small Companies (2-20 empl.)	414	101.0	65.5	47.1
Medium Companies (21-100)	1768	55.6	85.1	43.8
Large Companies (101-1000)	10,479	33.3	99.2	47.5
<u>Primary Classification:</u>				
A- Animal Agriculture(6)	2083	13.9	38.1	37.4
B- Plant Agriculture(8)	4649	19.4	214.7	49.9
G- Reagents(3)	1300	19.5	35.8	34.7
J- Specialty Chemicals(3)	3583	11.3	58.9	43.2
K- Human Diagnostics(19)	2801	32.3	58.7	38
P- Therapeutics(28)	8222	39.8	122.4	79.4

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The current R&D Budget (\$M), R&D Budget as a percent of a. total financing and b. expected revenues for this year, and R&D Budget per employee (\$M) are listed for companies in these classifications. Budget data were listed for 106 companies of the 137 that returned questionnaires. Due to incomplete answering of the questionnaires, these samples represent answers from 86 to 106 companies, depending on the category. The numbers of companies in each primary classification with data in the table appears in parentheses.

VII Areas of Interest of Biotechnology Companies

VII-A Is another copy of the key to the classification code which will be used extensively in this section.

V-B, which follows, is a listing of all biotechnology companies, with their primary and secondary interests listed. Their size is also given. Refer to the classification code on the previous page for the key.

NCBC Business Studies Program

CLASSIFICATION CODES FOR COMPANIES:

A	AGRICULTURE, ANIMAL
B	AGRICULTURE, PLANT
C	BIOMASS CONVERSION
D	BIOSENSORS/BIOELECTRONICS
E	BIOSEPARATIONS
F	BIOTECHNOLOGY EQUIPMENT
G	BIOTECHNOLOGY REAGENTS
H	CELL CULTURE, GENERAL
I	CHEMICALS, COMMODITY
J	CHEMICALS, SPECIALTY
K	DIAGNOSTICS-CLINICAL HUMAN
L	ENERGY
M	FOOD PRODUCTION/PROCESSING
N	MINING
O	PRODUCTION/FERMENTATION
P	THERAPEUTICS
Q	VACCINES
R	WASTE DISPOSAL/TREATMENT
S	OTHER-NONCLASSIFIED
T	MARINE BIOTECHNOLOGY
U	CONSULTING
V	VETERINARY
W	RESEARCH
X	IMMUNOLOGICAL PRODUCTS
Y	TOXIN TESTING

April 1987

NCBC BUSINESS STUDIES PROGRAM - COMPANIES DATABASE

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	COMPANY NAME	SIZE	CLASSIFICATION	
			PRIMARY	SECONDARY
1	A/G TECHNOLOGY CORP.	S	E	S
2	ADVANCED BIOTECHNOLOGIES	S	G	EHS
3	ADVANCED GENETIC SCIENCES	M	B	J
4	ADVANCED GENETICS RES. INST.	MU	V	Q
5	ADVANCED MAGNETICS, INC.	M	K	E
6	ADVANCED MINERAL TECHNOLOGIES	S	R	M
7	AGDIA, INC.	S	B	K
8	AGOURON INSTITUTE	S	W	
9	AGRACETUS	MJV	B	A
10	AGRI-DIAGNOSTICS ASSOCIATES	SJ	K	B
11	AGRIGENETICS CORPORATION	MU	B	
12	AGRITECH SYSTEMS, INC	M	K	
13	AGROTEK	MU	B	
14	ALFACELL CORPORATION	M	G	PX
15	ALLELIC BIOSYSTEMS	S	V	J
16	ALPHA I BIOMEDICALS	S	P	QK
17	AMBICO, INC.	M	V	Q
18	AMERICAN BIOCLINICAL	M	G	K
19	AMERICAN BIOGENETICS CORP	S	I	JBLO
20	AMERICAN BIONETICS, INC (ABN)	M	G	
21	AMERICAN BIOTECHNOLOGY CO	S	P	GHJ
22	AMERICAN DIAGNOSTICA, INC.	S	K	G
23	AMERICAN LABORATORIES, INC	M	P	KMO
24	AMERICAN QUALEX INTL, INC	S	G	FE
25	AMGEN	L	P	AJKG
26	AMTRON	S	V	X
27	AN-CON GENETICS	SU	F	
28	ANGENICS	M	K	
29	ANTIBODIES, INC.	M	V	K
30	ANTIVIRALS, INC	S	K	PG
31	APPLIED BIOSYSTEMS	L	F	G
32	APPLIED BIOTECHNOLOGY	M	V	QK
33	APPLIED GENETICS LABS. INC.	S	K	
34	APPLIED MICROBIOLOGY	S	S	
35	APPLIED PROTEIN TECHNOL. INC	S	F	JG
36	ATLANTIC ANTIBODIES	MU	G	X
37	AUTOMEDIX SCIENCES, INC	S	P	
38	BALL BIOTECH COMPANY	M	O	B
39	BEHRING DIAGNOSTICS	LU	K	G
40	BEND RESEARCH, INCORPORATED	M	E	D
41	BENTECH LABORATORIES	S	B	JO
42	BERKELEY ANTIBODY	S	S	GH
43	BETHYL LABS INC.	S	S	KA
44	BINAX, INC	S	K	AG
45	BIO HUMA NETICS	S	B	AR
46	BIO TECHNIQUES LABS., INC.	M	A	
47	BIO-RECOVERY, INC.	M	F	
48	BIO-RESPONSE INC.	M	P	

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	COMPANY NAME	SIZE	CLASSIFICATION	
			PRIMARY	SECONDARY
49	BIO-TECHNICAL RESOURCES, INC.	M	F	IJM
50	BIOASSAY SYSTEMS CORP.	MU	I	K
51	BIOCHEM TECHNOLOGY INC	S	D	O
52	BIOCLINICAL SYSTEMS, INC	SU	K	
53	BIOCONSEP, INC.	S	E	F
54	BIOCONTROL SYSTEMS	S	Y	R
55	BIOGEN	L	P	QGJ
56	BIOGENEX LABORATORIES	M	K	P
57	BIOLOGICAL ENERGY CORP.	S	C	LI
58	BIOLOGICS CORP	MU	V	QK
59	BIOMATERIALS INTERNATIONAL, INC	S	D	K
60	BIOMATRIX, INC.	M	W	
61	BIOMED RESEARCH LABS INC	S	V	A
62	BIOMEDICAL TECHNOLOGIES	S	J	HGK
63	BIONETICS RESEARCH	S	W	KG
64	BIONIQUE LABS INC.	S	H	K
65	BIOPOLYMERS, INC.	S	S	HJ
66	BIOPROBE INTERNATIONAL, INC.	S	E	KS
67	BIOPRODUCTS FOR SCIENCE, INC.	S	X	G
68	BIOPURE	S	O	JPX
69	BIOSCIENCE MANAGEMENT INC.	S	J	SRD
70	BIOSEARCH, INC.	MU	G	F
71	BIOSPHERICS	L	S	IDFR
72	BIOSTAR MEDICAL PRODUCTS, INC.	M	K	WF
73	BIOSYSTEMS, INC.	S	R	
74	BIOTECH RESEARCH LABS, INC	L	K	P
75	BIOTECHNICA INTERNATIONAL	L	B	KACM
76	BIOTECHNOLOGY DEVELOPMENT CORP	M	F	DPJQ
77	BIOTECHNOLOGY GENERAL CORP.	M	P	KV
78	BIOTEST DIAGNOSTICS CORP	SU	G	X
79	BIOTHERAPEUTICS, INC.	L	P	S
80	BIOTHERAPY SYSTEMS, INC.	S	P	X
81	BIOTHERM	S	K	
82	BIOTICS RESEARCH CORPORATION	M	M	
83	BRAIN RESEARCH INC.	S	K	
84	BREIT LABORATORIES	S	K	
85	CALGENE, INC.	M	B	B
86	CALIFORNIA BIOTECHNOLOGY INC.	L	P	AKQ
87	CALIFORNIA INTEGRATED DIAGNOST	SU	K	
88	CALZYME LABORATORIES, INC.	S	J	
89	CAMBRIDGE BIOSCIENCE CORP.	M	K	QP
90	CENTOCOR	L	P	JG
91	CETUS CORPORATION	L	P	BK0A
92	CHARLES	M	K	
93	CHARLES RIVER BIOTECH.SERVICES	MU	X	HF
94	CHEMGENES	S	G	
95	CHEMICAL DYNAMICS CORP.	M	G	
96	CHEMICON INTERNATIONAL, INC	S	G	K

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	COMPANY NAME	SIZE	CLASSIFICATION	
			PRIMARY	SECONDARY
97	CHIMERIX	S	K	
98	CHIRON CORPORATION	L	P	QK
99	CISTRON BIOTECHNOLOGY, INC.	M	P	X
100	CLINICAL BIOTECHNOLOGIES, INC.	M	M	F
101	CLINICAL SCIENCES, INC.	M	G	KV
102	CLONTECH LABORATORIES, INC.	S	G	X
103	CODON	M	V	KP
104	COLLABORATIVE RESEARCH INC.	L	G	KP
105	COLLAGEN CORPORATION	L	S	H
106	CONSOLIDATED BIOTECHNOLOGY, INC	S	G	M
107	COOPER DEVELOPMENT CO.	LU	P	K
108	COORS BIOTECH PRODUCTS CO.	LU	M	OJ
109	CORNING BIOMEDICAL RESEARCH	MU	M	
110	COVALENT TECHNOLOGY CORP.	S	K	
111	CREATIVE BIOMOLECULES	M	W	PG
112	CROP GENETICS INTERNATIONAL, NV	M	B	
113	CYANOTECH CORPORATION	M	M	BHJ
114	CYGNUS RESEARCH CORP.	S	S	PDK
115	CYTOGEN CORP	M	K	PX
116	CYTOTECH, INC	S	K	G
117	CYTOX CORPORATION	M	R	LC
118	DAKO CORP	U	X	K
119	DAMON BIOTECH INC.	L	P	X
120	DEKALB-PFIZER GENETICS	LJV	B	
121	DELTOWN CHEMURGIC CORP.	M	J	
122	DIAGNON CORP.	M	A	K
123	DIAGNOSTIC PRODUCTS, CORP.	L	G	K
124	DIAGNOSTIC TECHNOLOGY, INC.	M	K	GF
125	DIAMEDIX, INC.	M	K	G
126	DNA PLANT TECHNOLOGY CORP.	M	B	M
127	DNAX	MU	P	WH
128	E-Y LABORATORIES, INC	S	S	KJ
129	ELECTRO-NUCLEONICS, INC.	L	K	EFGH
130	EMBEX, INC.	S	A	
131	EMTECH RESEARCH	M	B	S
132	ENDOTRONICS, INC.	L	F	HPD
133	ENGENICS, INC.	M	O	E
134	ENVIRONMENTAL DIAGNOSTICS, INC	M	Y	
135	ENZO BIOCHEM, INC.	L	K	GP
136	ENZON	M	P	V
137	ENZON, INC.	M	P	
138	ENZYME CENTER INC., THE	M	O	E
139	ENZYME TECHNOLOGY CORP.	MU	O	MK
140	EPITOPE, INC.	M	G	S
141	EXOVIR, INC.	S	P	P
142	FERMENTEC CORP	M	O	C
143	FLOW LABORATORIES, INC.	LU	G	EF
144	GAMETRICS, LTD.	S	K	

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	COMPANY NAME	SIZE	CLASSIFICATION	
			PRIMARY	SECONDARY
145	GAMMA BIOLOGICALS, INC.	L	K	
146	GEN-PROBE, INC.	M	K	FG
147	GENENCOR, INC.	MJV	J	M
148	GENENTECH	L	P	JAQX
149	GENESIS LABS, INC.	M	K	K
150	GENETIC DIAGNOSTICS CORP.	S	K	AQ
151	GENETIC ENGINEERING, INC.	M	V	
152	GENETIC SYSTEMS CORP.	LU	K	P
153	GENETICS INSTITUTE, INC.	L	P	
154	GENEX INC.	M	I	JO
155	GENTRONIX, INC.	S	D	
156	GENZYME CORP.	L	P	KJGE
157	GLEN MILLS, INC.	S	S	F
158	GRANADA GENETICS CORP.	SU	A	M
159	HANA BIOLOGICS, INC.	M	P	H
160	HAWAII BIOTECHNOLOGY GROUP, INC	S	B	
161	HAZLETON BIOTECHNOLOGIES GRP	LU	G	FX
162	HOUSTON BIOTECH	M	P	
163	HP GENENCHEM	MJ	F	
164	HYBRITECH, INC.	LU	X	
165	HYCLONE LABORATORIES	L	H	EO
166	HYGEIA SCIENCES	M	K	
167	IDEC, INC.		P	
168	IDETEK, INC.	S	M	AB
169	IGEN		W	
170	IGENE BIOTECHNOLOGY INC.	M	M	O
171	IMMUCELL CORPORATION	S	A	GHQ
172	IMMUNETECH PHARMACEUTICALS	M	X	P
173	IMMUNEX CORP.	L	P	AG
174	IMMUNO MODULATORS LABS. INC	M	P	AGKH
175	IMMUNOGEN, INC.	S	W	P
176	IMMUNOMED	S	Q	HP
177	IMMUNOMEDICS, INC.	M	P	SGL
178	IMMUNOTECH CORP.	S	K	J
179	IMRE CORP	M	W	
180	IMREG, INC.	M	X	
181	IN VITRO INTERNATIONAL, INC.	JV	H	
182	INCELL CORPORATION	M	J	
183	INFERGENE COMPANY	M	S	JI
184	INGENE, INC.	M	P	J
185	INTEGRATED CHEMICAL SENSORS	S	D	D
186	INTEGRATED GENETICS, INC.	L	P	KA
187	INTEK DIAGNOSTICS, INC.	M	X	
188	INTELLI-GENETICS	M	S	F
189	INTER-AMERICAN RESEARCH ASC.	M	G	XWK
190	INTER-CELL TECHNOLOGIES, INC.	S	S	EGK
191	INTERFERON SCIENCES, INC.	M	P	GHB
192	INTERLEUKIN-2	S	P	KQX

	COMPANY NAME	SIZE	CLASSIFICATION	
			PRIMARY	SECONDARY
193	INTERN'TL ENZYMES, INC.	S	G	JX
194	INTERN'TL MINERAL & CHEMICAL	C	A	MV
195	INTERN'TL PLANT RESEARCH INST.	M	B	MFG
196	INTRA GENE INTERNATIONAL INC.	S	S	
197	INVITRON CORP.	L	P	
198	JACKSON IMMUNOREASEARCH LAB	S	G	G
199	KALLESTAD LABORATORIES	L	K	K
200	KARYON TECHNOLOGY, LTD.	M	H	
201	KIRIN-AMGEN	JVM	P	P
202	LEE BIOMOLECULAR RESEARCH LABS	S	W	HKQ
203	LIFE SCIENCES	S	W	XP
204	LIFECODES CORP.	M	K	D
205	LIFECORE, INC	S	J	F
206	LIPOSOME COMPANY INC.	M	J	P
207	LIPOSOME TECHNOLOGY	M	J	VBP
208	LUCKY BIOTECH CORP.	SU	P	JIBE
209	MARCOR DEVELOPMENT CORP.	S	J	G
210	MARICULTURA, INC.	S	T	
211	MELOY LABORATORIES, INC.	LU	W	E
212	MICROBIO RESOURCES	M	J	RPO
213	MICROBIOLOGICAL ASSOCIATES	L	Y	WV
214	MICROGENICS	M	K	K
215	MOLECULAR BIOSYSTEMS, INC.	M	G	JK
216	MOLECULAR DIAGNOSTICS, INC.	M	K	P
217	MOLECULAR GENETIC RESOURCES	S	G	K
218	MOLECULAR GENETICS, INC	L	A	BK
219	MONOCLONAL ANTIBODIES, INC.	L	K	
220	MONOCLONAL PRODUCTION INT'L	S	X	
221	MONOCLONETICS INTERNAT'L, INC.	S	G	HKP
222	MULTIPLE PEPTIDE SYSTEMS INC	S	F	
223	MUREX CORP.	L	K	PGQ
224	MYCOGEN	M	B	A
225	MYCOSEARCH, INC.	S	H	OCLR
226	NATIONAL GENO SCIENCES	S	S	
227	NEOGEN CORP.	M	B	AVFY
228	NEORX CORP.	M	P	K
229	NEUSHUL MARICULTURE	S	T	PMHC
230	NMS PHARMACEUTICALS	M	K	P
231	NORTH COAST BIOTECHNOLOGY INC	S	P	EFKO
232	NPI	L	B	HSJM
233	NUCLEAR & GENETIC TECHNOLOGY	S	K	X
234	NYGENE CORP.	S	F	H
235	O.C.S. LABS	S	J	DAC
236	OCEAN GENETICS	S	T	JP
237	OMNI BIOCHEM, INC.	S	J	G
238	ONCOGENE SCIENCE, INC	M	K	PX
239	PEL-FREEZ BIOLOGICALS, INC.	M	G	JX
240	PENINSULA LABORATORIES, INC	M	J	G

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	COMPANY NAME	SIZE	CLASSIFICATION	
			PRIMARY	SECONDARY
241	PETROFERM USA	M	L	J
242	PETROGEN INC.	S	L	
243	PHARMACIA BIOTECHNOLOGY GROUP	CU	E	GVA
244	PHARMATEC, INC	M	P	K
245	PHYTOGEN	S	B	
246	PLANT GENETICS, INC.	M	B	M
247	PRAXIS BIOLOGICS	Z	Q	XPK
248	PROMEGA BIOTECH	L	G	FJ
249	PROTATEK INTERNATIONAL, INC.	S	K	YJ
250	QUEUE SYSTEMS INC	M	F	SDEH
251	QUIDEL	L	P	K
252	R & A PLANT/SOIL INC.	S	T	BO
253	RECOMTEX CORP.	S	K	K
254	REPLIGEN CORP.	M	J	
255	RESEARCH&DIAGNOSTIC ANTIBODIES	S	K	XG
256	RIBI IMMUNOCHEM RESEARCH, INC.	M	P	AGKQ
257	RICERCA, INC	LU	S	BAM
258	SCOTT LABORATORIES	LU	G	J
259	SCRIPPS LABORATORIES	M	P	JG
260	SEAPHARM, INC.	M	T	P
261	SEPRACOR, INC.	M	B	FJK
262	SERAGEN, INC	L	X	G
263	SERONO LABS	L	P	KX
264	SIBIA	M	W	
265	SOUTHERN BIOTECH ASSOCIATES	S	-J	X
266	STRATAGENE CLONING SYSTEMS	M	G	F
267	SUMMA MEDICAL CORP.	M	G	KX
268	SUNGENE TECHNOLOGIES CORP	S	B	
269	SYNBIOTICS CORP.	M	K	QPS
270	SYNERGEN, INC.	L	W	PVQ
271	SYNGENE PRODUCTS	SU	P	VA
272	SYNTRO CORP.	M	A	JQ
273	SYVA CO	LU	K	K
274	T-CELL SCIENCES	M	P	KG
275	TECHNICLONE INTERNATIONAL, INC	S	K	
276	TECHNOMETRICS, INC.	S	O	
277	THREE-M(3M) DIAGNOSTIC SYSTEMS	LU	K	
278	TOXICON	M	U	Y
279	TRANSFORMATION RESEARCH INC.	S	X	
280	TRITON BIOSCIENCES, INC.	LU	P	KG
281	UNIGENE LABORATORIES, INC.	M	P	AJ
282	UNITED AGRISEEDS INC	L	B	
283	UNITED BIOMEDICAL INC	S	K	JX
284	UNITED STATES BIOCHEMICAL CORP	L	G	F
285	UNIVERSITY GENETICS CO.	M	A	BVS
286	UNIVERSITY MICRO REFERENCE LAB	S	G	
287	VECTOR LABORATORIES, INC.	M	G	F
288	VEGA BIOTECHNOLOGIES, INC.	L	F	G

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	COMPANY NAME	SIZE	CLASSIFICATION	
			PRIMARY	SECONDARY
289	VERAX CORP.	M	O	
290	VIRAGEN	S	P	
291	WESTBRIDGE RESEARCH GROUP	S	J	J
292	XENOGEN	S	W	KJ
293	XOMA CORP.	L	P	X
294	ZOECON CORP. (SANDOZ CROP PRO)	LU	B	IJ
295	ZYMED LABORATORIES, INC.	S	G	K
296	ZYMOGENETICS, INC.	M	P	W

VII-C Is a listing of the companies sorted by their primary classification. The number of companies in each class is listed in table VII-D.

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COMPANIES BY PRIMARY CLASSIFICATION

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CLASS CODE	COMPANY NAME	CLASS CODE	COMPANY NAME
1	A BIO TECHNIQUES LABS., INC.	2	A DIAGNON CORP.
3	A EMBREX, INC.	4	A GRANADA GENETICS CORP.
5	A IMMUCELL CORPORATION	6	A INTERN'TL MINERAL & CHEMICAL
7	A MOLECULAR GENETICS, INC	8	A SYNTRO CORP.
9	A UNIVERSITY GENETICS CO.	10	B ADVANCED GENETIC SCIENCES
11	B AGDIA, INC.	12	B AGRACETUS
13	B AGRIGENETICS CORPORATION	14	B AGROTEK
15	B BENTECH LABORATORIES	16	B BIO HUMA NETICS
17	B BIOTECHNICA INTERNATIONAL	18	B CALGENE, INC.
19	B CROP GENETICS INTERNATIONAL,NV	20	B DEKALB-PFIZER GENETICS
21	B DNA PLANT TECHNOLOGY CORP.	22	B EMTECH RESEARCH
23	B HAWAII BIOTECHNOLOGY GROUP, INC	24	B INTERN'TL PLANT RESEARCH INST.
25	B MYCOGEN	26	B NEOGEN CORP.
27	B NPI	28	B PHYTOGEN
29	B PLANT GENETICS, INC.	30	B SEPRACOR, INC.
31	B SUNGENE TECHNOLOGIES CORP	32	B UNITED AGRISEEDS INC
33	B ZOECON CORP. (SANDOZ CROP PRO)	34	C BIOLOGICAL ENERGY CORP.
35	D BIOCHEM TECHNOLOGY INC	36	D BIOMATERIALS INTERNATIONAL, INC
37	D GENTRONIX, INC.	38	D INTEGRATED CHEMICAL SENSORS
39	E A/G TECHNOLOGY CORP.	40	E BEND RESEARCH, INCORPORATED
41	E BIOCONSEP, INC.	42	E BIOPROBE INTERNATIONAL, INC.
43	E PHARMACIA BIOTECHNOLOGY GROUP	44	F AN-CON GENETICS
45	F APPLIED BIOSYSTEMS	46	F APPLIED PROTEIN TECHNOL. INC
47	F BIO-RECOVERY, INC.	48	F BIO-TECHNICAL RESOURCES, INC.
49	F BIOTECHNOLOGY DEVELOPMENT CORP	50	F ENDOTRONICS, INC.
51	F HP GENENCHEM	52	F MULTIPLE PEPTIDE SYSTEMS INC
53	F NYGENE CORP.	54	F QUEUE SYSTEMS INC
55	F VEGA BIOTECHNOLOGIES, INC.	56	G ADVANCED BIOTECHNOLOGIES
57	G ALFACELL CORPORATION	58	G AMERICAN BIOCLINICAL
59	G AMERICAN BIONETICS, INC (ABN)	60	G AMERICAN QUALEX INTL, INC
61	G ATLANTIC ANTIBODIES	62	G BIOSEARCH, INC.
63	G BIOTEST DIAGNOSTICS CORP	64	G CHEMGENES
65	G CHEMICAL DYNAMICS CORP.	66	G CHEMICON INTERNATIONAL, INC
67	G CLINICAL SCIENCES, INC.	68	G CLONTECH LABORATORIES, INC.
69	G COLLABORATIVE RESEARCH INC.	70	G CONSOLIDATED BIOTECHNOLOGY, INC
71	G DIAGNOSTIC PRODUCTS, CORP.	72	G EPITOPE, INC.
73	G FLOW LABORATORIES, INC.	74	G HAZLETON BIOTECHNOLOGIES GRP
75	G INTER-AMERICAN RESEARCH ASC.	76	G INTERN'TL ENZYMES, INC.
77	G JACKSON IMMUNORESEARCH LAB	78	G MOLECULAR BIOSYSTEMS, INC.
79	G MOLECULAR GENETIC RESOURCES	80	G MONOCLONETICS INTERNAT'L, INC.
81	G PEL-FREEZ BIOLOGICALS, INC.	82	G PROMEGA BIOTECH
83	G SCOTT LABORATORIES	84	G STRATAGENE CLONING SYSTEMS
85	G SUMMA MEDICAL CORP.	86	G UNITED STATES BIOCHEMICAL CORP
87	G UNIVERSITY MICRO REFERENCE LAB	88	G VECTOR LABORATORIES, INC.
89	G ZYMED LABORATORIES, INC.	90	H BIONIQUE LABS INC.
91	H HYCLONE LABORATORIES	92	H IN VITRO INTERNATIONAL, INC.
93	H KARYON TECHNOLOGY, LTD.	94	H MYCOSEARCH, INC.
95	I AMERICAN BIOGENETICS CORP	96	I BIOASSAY SYSTEMS CORP.
97	I GENEX INC.	98	J BIOMEDICAL TECHNOLOGIES
99	J BIOSCIENCE MANAGEMENT INC.	100	J CALZYME LABORATORIES, INC.

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COMPANIES BY PRIMARY CLASSIFICATION

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CLASS CODE	COMPANY NAME	CLASS CODE	COMPANY NAME
101	J DELTOWN CHEMURGIC CORP.	102	J GENENCOR, INC.
103	J INCELL CORPORATION	104	J LIFECORE, INC
105	J LIPOSOME COMPANY INC.	106	J LIPOSOME TECHNOLOGY
107	J MARCOR DEVELOPMENT CORP.	108	J MICROBIO RESOURCES
109	J O.C.S. LABS	110	J OMNI BIOCHEM, INC.
111	J PENINSULA LABORATORIES, INC	112	J REPLIGEN CORP.
113	J SOUTHERN BIOTECH ASSOCIATES	114	J WESTBRIDGE RESEARCH GROUP
115	K ADVANCED MAGNETICS, INC.	116	K AGRI-DIAGNOSTICS ASSOCIATES
117	K AGRITECH SYSTEMS, INC	118	K AMERICAN DIAGNOSTICA, INC.
119	K ANGENICS	120	K ANTIVIRALS, INC
121	K APPLIED GENETICS LABS. INC.	122	K BEHRING DIAGNOSTICS
123	K BINAX, INC	124	K BIOCLINICAL SYSTEMS, INC
125	K BIOGENEX LABORATORIES	126	K BIOSTAR MEDICAL PRODUCTS, INC.
127	K BIOTECH RESEARCH LABS, INC	128	K BIOTHERM
129	K BRAIN RESEARCH INC.	130	K BREIT LABORATORIES
131	K CALIFORNIA INTEGRATED DIAGNOST	132	K CAMBRIDGE BIOSCIENCE CORP.
133	K CHARLES	134	K CHIMERIX
135	K COVALENT TECHNOLOGY CORP.	136	K CYTOGEN CORP
137	K CYTOTECH, INC	138	K DIAGNOSTIC TECHNOLOGY, INC.
139	K DIAMEDIX, INC.	140	K ELECTRO-NUCLEONICS, INC.
141	K ENZO BIOCHEM, INC.	142	K GAMETRICS, LTD.
143	K GAMMA BIOLOGICALS, INC.	144	K GEN-PROBE, INC.
145	K GENESIS LABS, INC.	146	K GENETIC DIAGNOSTICS CORP.
147	K GENETIC SYSTEMS CORP.	148	K HYGEIA SCIENCES
149	K IMMUNOTECH CORP.	150	K KALLESTAD LABORATORIES
151	K LIFECODES CORP.	152	K MICROGENICS
153	K MOLECULAR DIAGNOSTICS, INC.	154	K MONOCLONAL ANTIBODIES, INC.
155	K MUREX CORP.	156	K NMS PHARMACEUTICALS
157	K NUCLEAR & GENETIC TECHNOLOGY	158	K ONCOGENE SCIENCE, INC
159	K PROTATEK INTERNATIONAL, INC.	160	K RECOMTEX CORP.
161	K RESEARCH&DIAGNOSTIC ANTIBODIES	162	K SYNBIOTICS CORP.
163	K SYVA CO	164	K TECHNICLONE INTERNATIONAL, INC
165	K THREE-M(3M) DIAGNOSTIC SYSTEMS	166	K UNITED BIOMEDICAL INC
167	L PETROFERM USA	168	L PETROGEN INC.
169	M BIOTICS RESEARCH CORPORATION	170	M CLINICAL BIOTECHNOLOGIES, INC.
171	M COORS BIOTECH PRODUCTS CO.	172	M CORNING BIOMEDICAL RESEARCH
173	M CYANOTECH CORPORATION	174	M IDETEK, INC.
175	M IGENE BIOTECHNOLOGY INC.	176	O BALL BIOTECH COMPANY
177	O BIOPURE	178	O ENGENICS, INC.
179	O ENZYME CENTER INC., THE	180	O ENZYME TECHNOLOGY CORP.
181	O FERMENTEC CORP	182	O TECHNOMETRICS, INC.
183	O VERAX CORP.	184	P ALPHA I BIOMEDICALS
185	P AMERICAN BIOTECHNOLOGY CO	186	P AMERICAN LABORATORIES, INC
187	P AMGEN	188	P AUTOMEDIX SCIENCES, INC
189	P BIO-RESPONSE INC.	190	P BIOGEN
191	P BIOTECHNOLOGY GENERAL CORP.	192	P BIOTHERAPEUTICS, INC.
193	P BIOTHERAPY SYSTEMS, INC.	194	P CALIFORNIA BIOTECHNOLOGY INC.
195	P CENTOCOR	196	P CETUS CORPORATION
197	P CHIRON CORPORATION	198	P CISTRON BIOTECHNOLOGY, INC.
199	P COOPER DEVELOPMENT CO.	200	P DAMON BIOTECH INC.

NCBC BUSINESS STUDIES PROGRAM
BIOTECHNOLOGY COMPANIES DATABASE
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COMPANIES BY PRIMARY CLASSIFICATION

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CLASS CODE	COMPANY NAME	CLASS CODE	COMPANY NAME
201	P DNAX	202	P ENZON
203	P ENZON, INC.	204	P EXOVIR, INC.
205	P GENENTECH	206	P GENETICS INSTITUTE, INC.
207	P GENZYME CORP.	208	P HANA BIOLOGICS, INC.
209	P HOUSTON BIOTECH	210	P IDEC, INC.
211	P IMMUNEX CORP.	212	P IMMUNO MODULATORS LABS. INC
213	P IMMUNOMEDICS, INC.	214	P INGENE, INC.
215	P INTEGRATED GENETICS, INC.	216	P INTERFERON SCIENCES, INC.
217	P INTERLEUKIN-2	218	P INVITRON CORP.
219	P KIRIN-AMGEN	220	P LUCKY BIOTECH CORP.
221	P NEORX CORP.	222	P NORTH COAST BIOTECHNOLOGY INC
223	P PHARMATEC, INC	224	P QUIDEL
225	P RIBI IMMUNOCHEM RESEARCH, INC.	226	P SCRIPPS LABORATORIES
227	P SERONO LABS	228	P SYNGENE PRODUCTS
229	P T-CELL SCIENCES	230	P TRITON BIOSCIENCES, INC.
231	P UNIGENE LABORATORIES, INC.	232	P VIRAGEN
233	P XOMA CORP.	234	P ZYMOGENETICS, INC.
235	Q IMMUNOMED	236	Q PRAXIS BIOLOGICS
237	R ADVANCED MINERAL TECHNOLOGIES	238	R BIOSYSTEMS, INC.
239	R CYTOX CORPORATION	240	S APPLIED MICROBIOLOGY
241	S BERKELEY ANTIBODY	242	S BETHYL LABS INC.
243	S BIOPOLYMERS, INC.	244	S BIOSPHERICS
245	S COLLAGEN CORPORATION	246	S CYGNUS RESEARCH CORP.
247	S E-Y LABORATORIES, INC	248	S GLEN MILLS, INC.
249	S INFERGENE COMPANY	250	S INTELLI-GENETICS
251	S INTER-CELL TECHNOLOGIES, INC.	252	S INTRA GENE INTERNATIONAL INC.
253	S NATIONAL GENO SCIENCES	254	S RICERCA, INC
255	T MARICULTURA, INC.	256	T NEUSHUL MARICULTURE
257	T OCEAN GENETICS	258	T R & A PLANT/SOIL INC.
259	T SEAPHARM, INC.	260	U TOXICON
261	V ADVANCED GENETICS RES. INST.	262	V ALLELIC BIOSYSTEMS
263	V AMBICO, INC.	264	V AMTRON
265	V ANTIBODIES, INC.	266	V APPLIED BIOTECHNOLOGY
267	V BIOLOGICS CORP	268	V BIOMED RESEARCH LABS INC
269	V CODON	270	V GENETIC ENGINEERING, INC.
271	W AGOURON INSTITUTE	272	W BIOMATRIX, INC.
273	W BIONETICS RESEARCH	274	W CREATIVE BIOMOLECULES
275	W IGEN	276	W IMMUNOGEN, INC.
277	W IMRE CORP	278	W LEE BIOMOLECULAR RESEARCH LABS
279	W LIFE SCIENCES	280	W MELOY LABORATORIES, INC.
281	W SIBIA	282	W SYNERGEN, INC.
283	W XENOGEN	284	X BIOPRODUCTS FOR SCIENCE, INC.
285	X CHARLES RIVER BIOTECH.SERVICES	286	X DAKO CORP
287	X HYBRITECH, INC.	288	X IMMUNETECH PHARMACEUTICALS
289	X IMREG, INC.	290	X INTEK DIAGNOSTICS, INC.
291	X MONOCLONAL PRODUCTION INT'L	292	X SERAGEN, INC
293	X TRANSFORMATION RESEARCH INC.	294	Y BIOCONTROL SYSTEMS
295	Y ENVIRONMENTAL DIAGNOSTICS, INC	296	Y MICROBIOLOGICAL ASSOCIATES

VII-D is a table of number of companies with primary or secondary interests in each classification code and for both classifications combined. The percent of total companies is also given.

AREAS OF INTEREST OF BIOTECHNOLOGY COMPANIES AND THEIR FREQUENCY OF OCCURANCE

CODE	CLASSIFICATION	PRIMARY CAT.		SECONDARY CAT.		BOTH CATEGORIES	
		NUMBER	%TOT.	NUMBER	%TOT.	NUMBER	%TOT.
A	AGRICULTURE, ANIMAL	9	3.0	23	7.8	32	10.8
B	AGRICULTURE, PLANT	24	8.1	13	4.4	37	12.5
C	BIOMASS CONVERSION	1	0.3	6	2.0	7	2.4
D	BIOSENSORS/BIOELECTRONICS	4	1.4	9	3.0	13	4.4
E	BIOSEPARATIONS	5	1.7	14	4.7	19	6.4
F	BIOTECHNOLOGY EQUIPMENT	12	4.1	23	7.8	35	11.8
G	BIOTECHNOLOGY REAGENTS	34	11.5	41	13.9	75	25.3
H	CELL CULTURE, GENERAL	5	1.7	22	7.4	27	9.1
I	CHEMICALS, COMMODITY	3	1.0	6	2.0	9	3.0
J	CHEMICALS, SPECIALTY	17	5.7	39	13.2	56	18.9
K	DIAGNOSTICS-CLINICAL	52	17.6	55	18.6	107	36.1
L	HUMAN ENERGY	2	0.7	5	1.7	7	2.4
M	FOOD PRODUCTION/PROCESSING	7	2.4	15	5.1	22	7.4
N	MINING	0	0.0	0	0.0	0	0.0
O	PRODUCTION/FERMENTATION	8	2.7	12	4.1	20	6.8
P	THERAPEUTICS	51	17.2	33	11.1	84	28.4
Q	VACCINES	2	0.7	20	6.8	22	7.4
R	WASTE DISPOSAL/TREATMENT	3	1.0	6	2.0	9	3.0
S	OTHER-NONCLASSIFIED	15	5.1	12	4.1	27	9.1
T	MARINE BIOTECHNOLOGY	5	1.7	0	0.0	5	1.7
U	CONSULTING	1	0.3	0	0.0	1	0.3
V	VETERINARY	10	3.4	11	3.7	21	7.1
W	RESEARCH	13	4.4	5	1.7	18	6.1
X	IMMUNOLOGICAL PRODUCTS	10	3.4	26	8.8	36	12.2
Y	TOXIN TESTING	3	1.0	3	1.0	6	2.0
	*** TOTAL IS 296 COMPANIES ***						

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VII-E is the primary classification information from previous table, now sorted by primary code in descending order. Thus, almost 20% of the companies are primarily involved in human diagnostics, followed by therapeutics, reagents, etc.

VII-F is a similar table, but sorted by secondary classification code in descending order.

VII-G, which follows combines both primary and secondary classifications to show percent of companies with some involvement in each category.

NCBC BUSINESS STUDIES PROGRAM

BIOTECHNOLOGY COMPANIES, SORT BY FREQUENCY OF PRIMARY CATEGORY

CODE	CLASSIFICATION	PRIMARY CATEGORY		
		NUMBER	%TOT.	RANK
K	DIAGNOSTICS-CLINICAL HUMAN	52	17.6	1
P	THERAPEUTICS - human	51	17.2	2
G	BIOTECHNOLOGY REAGENTS	34	11.5	3
B	AGRICULTURE, PLANT	24	8.1	4
J	CHEMICALS, SPECIALTY	17	5.7	5
S	OTHER-NONCLASSIFIED	15	5.1	6
W	RESEARCH	13	4.4	7
F	BIOTECHNOLOGY EQUIPMENT	12	4.1	8
X	IMMUNOLOGICAL PRODUCTS	10	3.4	9
V	VETERINARY	10	3.4	10
A	AGRICULTURE, ANIMAL	9	3.0	11
O	PRODUCTION/FERMENTATION	8	2.7	12
M	FOOD PRODUCTION/PROCESSING	7	2.4	13
E	BIOSEPARATIONS	5	1.7	14
H	CELL CULTURE, GENERAL	5	1.7	15
T	MARINE BIOTECHNOLOGY	5	1.7	16
D	BIOSENSORS/BIOELECTRONICS	4	1.4	17
I	CHEMICALS, COMMODITY	3	1.0	18
Y	TOXIN TESTING	3	1.0	19
R	WASTE DISPOSAL/TREATMENT	3	1.0	20
L	ENERGY	2	0.7	21
Q	VACCINES	2	0.7	22
C	BIOMASS CONVERSION	1	0.3	23
U	CONSULTING	1	0.3	24
N	MINING	0	0.0	25

"" TOTAL IS 296 COMPANIES""

animal vaccines under veterinary

NCBC BUSINESS STUDIES PROGRAM

BIOTECHNOLOGY COMPANIES, SORT BY FREQUENCY OF SECONDARY CATEGORY

CODE	CLASSIFICATION	SECONDARY CAT.		RANK
		NUMBER	% TOT.	
K	DIAGNOSTICS-CLINICAL HUMAN	55	18.6	1
G	BIOTECHNOLOGY REAGENTS	41	13.9	2
J	CHEMICALS, SPECIALTY	39	13.2	3
P	THERAPEUTICS	33	11.1	4
X	IMMUNOLOGICAL PRODUCTS	26	8.8	5
A	AGRICULTURE, ANIMAL	23	7.8	6
F	BIOTECHNOLOGY EQUIPMENT	23	7.8	7
H	CELL CULTURE, GENERAL	22	7.4	8
Q	VACCINES	20	6.8	9
M	FOOD PRODUCTION/PROCESSING	15	5.1	10
E	BIOSEPARATIONS	14	4.7	11
B	AGRICULTURE, PLANT	13	4.4	12
S	OTHER-NONCLASSIFIED	12	4.1	13
O	PRODUCTION/FERMENTATION	12	4.1	14
V	VETERINARY	11	3.7	15
D	BIOSENSORS/BIOELECTRONICS	9	3.0	16
C	BIOMASS CONVERSION	6	2.0	17
I	CHEMICALS, COMMODITY	6	2.0	18
R	WASTE DISPOSAL/TREATMENT	6	2.0	19
L	ENERGY	5	1.7	20
W	RESEARCH	5	1.7	21
Y	TOXIN TESTING	3	1.0	22
U	CONSULTING	0	0.0	23
T	MARINE BIOTECHNOLOGY	0	0.0	24
N	MINING	0	0.0	25

"" TOTAL IS 296 COMPANIES""

NCBC BUSINESS STUDIES PROGRAM

AREAS OF INTEREST OF BIOTECHNOLOGY COMPANIES SORTED BY BOTH PRIMARY AND SECONDARY INTERESTS COMBINED

CODE	CLASSIFICATION	BOTH CATEGORIES		
		NUMBER	%TOT.	RANK
K	DIAGNOSTICS-CLINICAL HUMAN	107	36.1	1
P	THERAPEUTICS	84	28.4	2
G	BIOTECHNOLOGY REAGENTS	75	25.3	3
J	CHEMICALS, SPECIALTY	56	18.9	4
B	AGRICULTURE, PLANT	37	12.5	5
X	IMMUNOLOGICAL PRODUCTS	36	12.2	6
F	BIOTECHNOLOGY EQUIPMENT	35	11.8	7
A	AGRICULTURE, ANIMAL	32	10.8	8
H	CELL CULTURE, GENERAL	27	9.1	9
S	OTHER-NONCLASSIFIED	27	9.1	10
M	FOOD PRODUCTION/PROCESSING	22	7.4	11
Q	VACCINES	22	7.4	12
V	VETERINARY	21	7.1	13
O	PRODUCTION/FERMENTATION	20	6.8	14
E	BIOSEPARATIONS	19	6.4	15
W	RESEARCH	18	6.1	16
D	BIOSENSORS/BIOELECTRONICS	13	4.4	17
I	CHEMICALS, COMMODITY	9	3.0	18
R	WASTE DISPOSAL/TREATMENT	9	3.0	19
C	BIOMASS CONVERSION	7	2.4	20
L	ENERGY	7	2.4	21
Y	TOXIN TESTING	6	2.0	22
T	MARINE BIOTECHNOLOGY	5	1.7	23
U	CONSULTING	1	0.3	24
N	MINING	0	0.0	25
*** TOTAL IS 296 COMPANIES***				

VII-H is a table of the percent of companies in the top six categories of interest that fall into private, public, and subsidiary financing status. These data are from the entire database and the number of companies in each category is also shown.

U.S. BIOTECHNOLOGY COMPANIES--TYPE OF FINANCING

Category	n	Private Companies	Public Companies	Subsidiaries
A- Animal Agriculture	9	33.3	55.6	11.1
B- Plant Agriculture	24	66.7	20.8	12.5
G- Reagents	34	58.8	23.5	17.6
J- Specialty Chemicals	17	82.4	17.6	0.0
K- Diagnostics, Human	52	53.8	30.8	15.4
P- Therapeutics	51	33.3	56.9	9.8

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VII-I is a set of 23 separate listings of companies in each class, either as their primary or secondary interest. Product information is also given for each company, as is the year of founding. Note that there are no listings for N=mining, as there were no companies in this classifications in the database.

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	CODE	COMPANY NAME
1	A	BIO TECHNIQUES LABS., INC.
2	A	DIAGNON CORP.
3	A	EMBEX, INC.
4	A	GRANADA GENETICS CORP.
5	A	IMMUCELL CORPORATION
6	A	INTERN'TL MINERAL & CHEMICAL
7	A	MOLECULAR GENETICS, INC
8	A	SYNTRO CORP.
9	A	UNIVERSITY GENETICS CO.
10	B	ADVANCED GENETIC SCIENCES
11	B	AGDIA, INC.
12	B	AGRACETUS
13	B	AGRIGENETICS CORPORATION
14	B	AGROTEK
15	B	BENTECH LABORATORIES
16	B	BIO HUMA NETICS
17	B	BIOTECHNICA INTERNATIONAL
18	B	CALGENE, INC.
19	B	CROP GENETICS INTERNATIONAL, NV
20	B	DEKALB-PFIZER GENETICS
21	B	DNA PLANT TECHNOLOGY CORP.
22	B	EMTECH RESEARCH
23	B	HAWAII BIOTECHNOLOGY GROUP, INC
24	B	INTERN'TL PLANT RESEARCH INST.
25	B	MYCOGEN
26	B	NEOGEN CORP.
27	B	NPI
28	B	PHYTOGEN
29	B	PLANT GENETICS, INC.
30	B	SEPRACOR, INC.
31	B	SUNGENE TECHNOLOGIES CORP
32	B	UNITED AGRISEEDS INC
33	B	ZOECON CORP. (SANDOZ CROP PRO)
34	C	BIOLOGICAL ENERGY CORP.
35	D	BIOCHEM TECHNOLOGY INC
36	D	BIOMATERIALS INTERNATIONAL, INC
37	D	GENTRONIX, INC.
38	D	INTEGRATED CHEMICAL SENSORS
39	E	A/G TECHNOLOGY CORP.
40	E	BEND RESEARCH, INCORPORATED
41	E	BIOCONSEP, INC.
42	E	BIOPROBE INTERNATIONAL, INC.
43	E	PHARMACIA BIOTECHNOLOGY GROUP
44	F	AN-CON GENETICS
45	F	APPLIED BIOSYSTEMS
46	F	APPLIED PROTEIN TECHNOL. INC
47	F	BIO-RECOVERY, INC.
48	F	BIO-TECHNICAL RESOURCES, INC.
49	F	BIOTECHNOLOGY DEVELOPMENT CORP
50	F	ENDOTRONICS, INC.
51	F	HP GENENCHEM
52	F	MULTIPLE PEPTIDE SYSTEMS INC

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	CODE	COMPANY NAME
53	F	NYGENE CORP.
54	F	QUEUE SYSTEMS INC
55	F	VEGA BIOTECHNOLOGIES, INC.
56	G	ADVANCED BIOTECHNOLOGIES
57	G	ALFACELL CORPORATION
58	G	AMERICAN BIOCLINICAL
59	G	AMERICAN BIONETICS, INC (ABN)
60	G	AMERICAN QUALEX INTL, INC
61	G	ATLANTIC ANTIBODIES
62	G	BIOSEARCH, INC.
63	G	BIOTEST DIAGNOSTICS CORP
64	G	CHEMGENES
65	G	CHEMICAL DYNAMICS CORP.
66	G	CHEMICON INTERNATIONAL, INC
67	G	CLINICAL SCIENCES, INC.
68	G	CLONTECH LABORATORIES, INC.
69	G	COLLABORATIVE RESEARCH INC.
70	G	CONSOLIDATED BIOTECHNOLOGY, INC
71	G	DIAGNOSTIC PRODUCTS, CORP.
72	G	EPITOPE, INC.
73	G	FLOW LABORATORIES, INC.
74	G	HAZLETON BIOTECHNOLOGIES GRP
75	G	INTER-AMERICAN RESEARCH ASC.
76	G	INTERN'TL ENZYMES, INC.
77	G	JACKSON IMMUNOREASEARCH LAB
78	G	MOLECULAR BIOSYSTEMS, INC.
79	G	MOLECULAR GENETIC RESOURCES
80	G	MONOCLONETICS INTERNAT'L, INC.
81	G	PEL-FREEZ BIOLOGICALS, INC.
82	G	PROMEGA BIOTECH
83	G	SCOTT LABORATORIES
84	G	STRATAGENE CLONING SYSTEMS
85	G	SUMMA MEDICAL CORP.
86	G	UNITED STATES BIOCHEMICAL CORP
87	G	UNIVERSITY MICRO REFERENCE LAB
88	G	VECTOR LABORATORIES, INC.
89	G	ZYMED LABORATORIES, INC.
90	H	BIONIQUE LABS INC.
91	H	HYCLONE LABORATORIES
92	H	IN VITRO INTERNATIONAL, INC.
93	H	KARYON TECHNOLOGY, LTD.
94	H	MYCOSEARCH, INC.
95	I	AMERICAN BIOGENETICS CORP.
96	I	BIOASSAY SYSTEMS CORP.
97	I	GENEX INC.
98	J	BIOMEDICAL TECHNOLOGIES
99	J	BIOSCIENCE MANAGEMENT INC.
100	J	CALZYME LABORATORIES, INC.
101	J	DELTOWN CHEMURGIC CORP.
102	J	GENENCOR, INC.
103	J	INCELL CORPORATION
104	J	LIFECORE, INC

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	CODE	COMPANY NAME
105	J	LIPOSOME COMPANY INC.
106	J	LIPOSOME TECHNOLOGY
107	J	MARCOR DEVELOPMENT CORP.
108	J	MICROBIO RESOURCES
109	J	O.C.S. LABS
110	J	OMNI BIOCHEM, INC.
111	J	PENINSULA LABORATORIES, INC
112	J	REPLIGEN CORP.
113	J	SOUTHERN BIOTECH ASSOCIATES
114	J	WESTBRIDGE RESEARCH GROUP
115	K	ADVANCED MAGNETICS, INC.
116	K	AGRI-DIAGNOSTICS ASSOCIATES
117	K	AGRITECH SYSTEMS, INC
118	K	AMERICAN DIAGNOSTICA, INC.
119	K	ANGENICS
120	K	ANTIVIRALS, INC
121	K	APPLIED GENETICS LABS. INC.
122	K	BEHRING DIAGNOSTICS
123	K	BINAX, INC
124	K	BIOClinical SYSTEMS, INC
125	K	BIOGENEX LABORATORIES
126	K	BIOSTAR MEDICAL PRODUCTS, INC.
127	K	BIOTECH RESEARCH LABS, INC
128	K	BIO THERM
129	K	BRAIN RESEARCH INC.
130	K	BREIT LABORATORIES
131	K	CALIFORNIA INTEGRATED DIAGNOST
132	K	CAMBRIDGE BIOSCIENCE CORP.
133	K	CHARLES
134	K	CHIMERIX
135	K	COVALENT TECHNOLOGY CORP.
136	K	CYTOGEN CORP
137	K	CYTOTECH, INC
138	K	DIAGNOSTIC TECHNOLOGY, INC.
139	K	DIAMEDIX, INC.
140	K	ELECTRO-NUCLEONICS, INC.
141	K	ENZO BIOCHEM, INC.
142	K	GAMETRICS, LTD.
143	K	GAMMA BIOLOGICALS, INC.
144	K	GEN-PROBE, INC.
145	K	GENESIS LABS, INC.
146	K	GENETIC DIAGNOSTICS CORP.
147	K	GENETIC SYSTEMS CORP.
148	K	HYGEIA SCIENCES
149	K	IMMUNOTECH CORP.
150	K	KALLESTAD LABORATORIES
151	K	LIFECODES CORP.
152	K	MICROGENICS
153	K	MOLECULAR DIAGNOSTICS, INC.
154	K	MONOCLONAL ANTIBODIES, INC.
155	K	MUREX CORP.
156	K	NMS PHARMACEUTICALS

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	CODE	COMPANY NAME
157	K	NUCLEAR & GENETIC TECHNOLOGY
158	K	ONCOGENE SCIENCE, INC
159	K	PROTATEK INTERNATIONAL, INC.
160	K	RECOMTEX CORP.
161	K	RESEARCH&DIAGNOSTIC ANTIBODIES
162	K	SYNBIOTICS CORP.
163	K	SYVA CO
164	K	TECHNICLONE INTERNATIONAL, INC
165	K	THREE-M(3M) DIAGNOSTIC SYSTEMS
166	K	UNITED BIOMEDICAL INC
167	L	PETROFERM USA
168	L	PETROGEN INC.
169	M	BIOTICS RESEARCH CORPORATION
170	M	CLINICAL BIOTECHNOLOGIES, INC.
171	M	COORS BIOTECH PRODUCTS CO.
172	M	CORNING BIOMEDICAL RESEARCH
173	M	CYANOTECH CORPORATION
174	M	IDETEK, INC.
175	M	IGENE BIOTECHNOLOGY INC.
176	O	BALL BIOTECH COMPANY
177	O	BIOPURE
178	O	ENGENICS, INC.
179	O	ENZYME CENTER INC., THE
180	O	ENZYME TECHNOLOGY CORP.
181	O	FERMENTEC CORP
182	O	TECHNOMETRICS, INC.
183	O	VERAX CORP.
184	P	ALPHA I BIOMEDICALS
185	P	AMERICAN BIOTECHNOLOGY CO
186	P	AMERICAN LABORATORIES, INC
187	P	AMGEN
188	P	AUTOMEDIX SCIENCES, INC
189	P	BIO-RESPONSE INC.
190	P	BIOGEN
191	P	BIOTECHNOLOGY GENERAL CORP.
192	P	BIOTHERAPEUTICS, INC.
193	P	BIOTHERAPY SYSTEMS, INC.
194	P	CALIFORNIA BIOTECHNOLOGY INC.
195	P	CENTOCOR
196	P	CETUS CORPORATION
197	P	CHIRON CORPORATION
198	P	CISTRON BIOTECHNOLOGY, INC.
199	P	COOPER DEVELOPMENT CO.
200	P	DAMON BIOTECH INC.
201	P	DNAX
202	P	ENZON
203	P	ENZON, INC.
204	P	EXOVIR, INC.
205	P	GENENTECH
206	P	GENETICS INSTITUTE, INC.
207	P	GENZYME CORP.
208	P	HANA BIOLOGICS, INC.

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CODE	COMPANY NAME
209	P HOUSTON BIOTECH
210	P IDEC, INC.
211	P IMMUNEX CORP.
212	P IMMUNO MODULATORS LABS. INC
213	P IMMUNOMEDICS, INC.
214	P INGENE, INC.
215	P INTEGRATED GENETICS, INC.
216	P INTERFERON SCIENCES, INC.
217	P INTERLEUKIN-2
218	P INVITRON CORP.
219	P KIRIN-AMGEN
220	P LUCKY BIOTECH CORP.
221	P NEORX CORP.
222	P NORTH COAST BIOTECHNOLOGY INC
223	P PHARMATEC, INC
224	P QUIDEL
225	P RIBI IMMUNOCHEM RESEARCH, INC.
226	P SCRIPPS LABORATORIES
227	P SERONO LABS
228	P SYNGENE PRODUCTS
229	P T-CELL SCIENCES
230	P TRITON BIOSCIENCES, INC.
231	P UNIGENE LABORATORIES, INC.
232	P VIRAGEN
233	P XOMA CORP.
234	P ZYMOGENETICS, INC.
235	Q IMMUNOMED
236	Q PRAXIS BIOLOGICS
237	R ADVANCED MINERAL TECHNOLOGIES
238	R BIOSYSTEMS, INC.
239	R CYTOX CORPORATION
240	S APPLIED MICROBIOLOGY
241	S BERKELEY ANTIBODY
242	S BETHYL LABS INC.
243	S BIOPOLYMERS, INC.
244	S BIOSPHERICS
245	S COLLAGEN CORPORATION
246	S CYGNUS RESEARCH CORP.
247	S E-Y LABORATORIES, INC
248	S GLEN MILLS, INC.
249	S INFERGENE COMPANY
250	S INTELLI-GENETICS
251	S INTER-CELL TECHNOLOGIES, INC.
252	S INTRA GENE INTERNATIONAL INC.
253	S NATIONAL GENO SCIENCES
254	S RICERCA, INC
255	T MARICULTURA, INC.
256	T NEUSHUL MARICULTURE
257	T OCEAN GENETICS
258	T R & A PLANT/SOIL INC.
259	T SEAPHARM, INC.
260	U TOXICON

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	CODE	COMPANY NAME
261	V	ADVANCED GENETICS RES. INST.
262	V	ALLELIC BIOSYSTEMS
263	V	AMBICO, INC.
264	V	AMTRON
265	V	ANTIBODIES, INC.
266	V	APPLIED BIOTECHNOLOGY
267	V	BIOLOGICS CORP
268	V	BIOMED RESEARCH LABS INC
269	V	CODON
270	V	GENETIC ENGINEERING, INC.
271	W	AGOURON INSTITUTE
272	W	BIOMATRIX, INC.
273	W	BIONETICS RESEARCH
274	W	CREATIVE BIOMOLECULES
275	W	IGEN
276	W	IMMUNOGEN, INC.
277	W	IMRE CORP
278	W	LEE BIOMOLECULAR RESEARCH LABS
279	W	LIFE SCIENCES
280	W	MELOY LABORATORIES, INC.
281	W	SIBIA
282	W	SYNERGEN, INC.
283	W	XENOGEN
284	X	BIOPRODUCTS FOR SCIENCE, INC.
285	X	CHARLES RIVER BIOTECH.SERVICES
286	X	DAKO CORP
287	X	HYBRITECH, INC.
288	X	IMMUNETECH PHARMACEUTICALS
289	X	IMREG, INC.
290	X	INTEK DIAGNOSTICS, INC.
291	X	MONOCLONAL PRODUCTION INT'L
292	X	SERAGEN, INC
293	X	TRANSFORMATION RESEARCH INC.
294	Y	BIOCONTROL SYSTEMS
295	Y	ENVIRONMENTAL DIAGNOSTICS, INC
296	Y	MICROBIOLOGICAL ASSOCIATES

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 BIOTECHNOLOGY COMPANIES IN ANIMAL AGRICULTURE (A)

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PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
A		BIO TECHNIQUES LABS., INC. FEED ADDITIVES;	1982
A	K	DIAGNON CORP. ASSAYS=FERRITIN,B12/FOLATE,HERPES,VIR TR	1981
A		EMBREX, INC. BIOLOGICALS FOR IN-OVO APPL IN POULTRY	1985
A	M	GRANADA GENETICS CORP. BULL GENETICS, SHRIMP, FOOD	1979
A	GHQ	IMMUCELL CORPORATION 2 HUMAN DX;REAGENTS;3 ANIMAL DX;1 VACCIN	1982
A	MV	INTERN'TL MINERAL & CHEMICAL ANIMAL GROWTH, HEALTH AND, NUTRITION	1970
A	BK	MOLECULAR GENETICS, INC AG AND VET PRODS, SCOURS VACCINE;DXS	1979
A	JQ	SYNTRO CORP. ANIMAL VACCINES & DX;ANIMAL HEALTH PRODS	1981
A	BVS	UNIVERSITY GENETICS CO. LICENSES;50 CLON OR CULT PLANT; CELL&EMB	1981
B	A	AGRACETUS TERMITICIDE, VACCINES, MICROBIAL INOCUL	1981
B	AR	BIO HUMA NETICS SOIL CONDITIONERS;FEED SUPPLMTS;WASTE TH	1984
B	KACM	BIOTECHNICA INTERNATIONAL DIAG TEST; INNOCULANT, LITE BEER, ETC	1981
B	A	MYCOGEN PLANT HERBICIDES BASED ON NAT. PATHOGENS	1982
B	AVFY	NEOGEN CORP. FOOD, PLANT HEALTH, ANIMAL HEALTH	1981
E	GVA	PHARMACIA BIOTECHNOLOGY GROUP CHROMA SEPARATION CHEMICALS & INSTRUMENT	1960
J	DAC	O.C.S. LABS CUSTOM MADE SYNTHETIC GENES & PEPTIDES	1984
K	AG	BINAX, INC MABS, DX TEST KITS,VET DX	1986
K	AQ	GENETIC DIAGNOSTICS CORP. DIAGNOSTIC TEST KITS	1981
M	AB	IDETEK, INC. DX TEST KITS FOR FOOD & AGRICULTURE	1983
P	AJKG	AMGEN RESEARCH REAGENTS EGF, IGF, IFN, ETC.	1980
P	AKQ	CALIFORNIA BIOTECHNOLOGY INC. QUESTIONNAIRE STATES ZERO PRODUCTS	1981
P	BK0A	CETUS CORPORATION INTERFERON;INTERLEUKIN-2;MAB;ANTI-NEOPL	1971
P	JAQX	GENENTECH INSULIN, HGH, TPA, HSA, IF, ENZYMES	1976
P	AG	IMMUNEX CORP. IL-2; GM-CSF; IL-1; IL-1BETA;LYMPHOKINES	1981
P	AGKH	IMMUNO MODULATORS LABS. INC INTERFERONS;AIDS TH;COSMETICS;HCG;ETC.	1981

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BIOTECHNOLOGY COMPANIES IN ANIMAL AGRICULTURE (A)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
P	KA	INTEGRATED GENETICS, INC. DX DNA PROBES-SALMONELLA, GENETIC DIS	1981
P	AGKQ	RIBI IMMUNOCHEM RESEARCH, INC. VET-ANTI-TUMOR PROD; VET DX; VET VACCINES	1981
P	VA	SYNGENE PRODUCTS PRODUCTS FOR ANIMALS AND HUMAN HEALTH	1980
P	AJ	UNIGENE LABORATORIES, INC. NONE RESEARCH ON PEPTIDE HORMONES, ENZYM	1980
S	KA	BETHYL LABS INC. ANTISERA & CUSTOM ANTISERA SERVICE	1977
S	BAM	RICERCA, INC FERMENTATION AND RESEARCH	1986
V	A	BIOMED RESEARCH LABS INC FISH BIOLOGICS, VET	1974

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 BIOTECHNOLOGY COMPANIES IN PLANT AGRICULTURE (B)

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PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
A	BK	MOLECULAR GENETICS, INC AG AND VET PRODS, SCOURS VACCINE;DXS	1979
A	BVS	UNIVERSITY GENETICS CO. LICENSES;50 CLON OR CULT PLANT; CELL&EMB	1981
B	J	ADVANCED GENETIC SCIENCES RESEARCH FOR AGRI, FROSTBAN, SNOMAX	1979
B	K	AGDIA, INC. PLANT AND FOOD TOX DX FOR VIRUSES	1981
B	A	AGRACETUS TERMITICIDE, VACCINES, MICROBIAL INOCUL	1981
B		AGRIGENETICS CORPORATION SEED AND PLANT GENETICS	1980
B		AGROTEK PESTICIDES, NEMATODES	1983
B	JO	BENTECH LABORATORIES YIELD ENHANCING AGENT;ANTIFUNGAL;HEALING	1984
B	AR	BIO HUMA NETICS SOIL CONDITIONERS;FEED SUPPLMTS;WASTE TH	1984
B	KACM	BIOTECHNICA INTERNATIONAL DIAG TEST; INNOCULANT, LITE BEER, ETC	1981
B	B	CALGENE, INC. TOMATOES, COTTON,FOOD PROC.,	1980
B		CROP GENETICS INTERNATIONAL,NV DISEASE FREE SUGARCANE SEED	1981
B		DEKALB-PFIZER GENETICS HYBRID SEEDS, CORN, SOY, ETC.	1982
B	M	DNA PLANT TECHNOLOGY CORP. FOODS AND PLANTS, AGRICULTURAL PRODS	1981
B	S	EMTECH RESEARCH BIOTECH R&D FOR COSMETICS AND AGRICULTUR	1983
B		HAWAII BIOTECHNOLOGY GROUP,INC IMMUNOTOXINS, PESTICIDE DETECTION KIT	1982
B	MFG	INTERN'TL PLANT RESEARCH INST. DATE PALMS;GEN ENG REAGENTS;OIL PALMS;ET	1978
B	A	MYCOGEN PLANT HERBICIDES BASED ON NAT. PATHOGENS	1982
B	AVFY	NEOGEN CORP. FOOD, PLANT HEALTH, ANIMAL HEALTH	1981
B	HSJM	NPI POTATO & FLOWER SEEDS;SOIL INNOCUL;SEEDS	1973
B		PHYTOGEN VECTOR FOR PLANT TRANSFORMATION=PATENT	1980
B	M	PLANT GENETICS, INC. POTATO TR;HYBRID VEGS	1981
B	FJK	SEPRACOR, INC. MEMBRANE COLUMNS-ANTI-FACTOR 7 &ANTI-TPA	1984
B		SUNGENE TECHNOLOGIES CORP PLANT BREEDING	1981
B		UNITED AGRISEEDS INC RESEARCH ON PLANTS, SEEDS, ETC	1981

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 BIOTECHNOLOGY COMPANIES IN PLANT AGRICULTURE (B)

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PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
B	IJ	ZOECON CORP. (SANDOZ CROP PRO) PLANT IMPROVEMENT AND AG CHEMICALS	1968
I	JBLO	AMERICAN BIOGENETICS CORP PROCESS DESIGN MICROORGANISMS-CHEMICALS	1984
J	VBP	LIPOSOME TECHNOLOGY LIPOSOMES FOR PHARM, VET, AG, ETC	1981
K	B	AGRI-DIAGNOSTICS ASSOCIATES TURF & CROP DISEASE DIAGNOSTIC KITS	1984
M	BHJ	CYANOTECH CORPORATION PHYCOBILIPROTEIN; SPIRULINA; B-CAROTENE; .	1983
M	AB	IDETEK, INC. DX TEST KITS FOR FOOD & AGRICULTURE	1983
O	B	BALL BIOTECH COMPANY PLANT VARIETIES	1985
P	BK0A	CETUS CORPORATION INTERFERON; INTERLEUKIN-2; MAB; ANTI-NEOPL	1971
P	GHB	INTERFERON SCIENCES, INC. INTERFERON	1981
P	JIBE	LUCKY BIOTECH CORP. IFN, HEPATITIS-B DX, PORCINE GH	1984
S	BAM	RICERCA, INC FERMENTATION AND RESEARCH	1986
T	BO	R & A PLANT/SOIL INC. ALGAL SOIL CONDITIONERS, FERTILIZERS, ETC	1978

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 BIOTECHNOLOGY COMPANIES IN BIOMASS CONVERVSION (C)

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PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
B	KACM	BIOTECHNICA INTERNATIONAL	1981
		DIAG TEST; INNOCULANT, LITE BEER, ETC	
C	LI	BIOLOGICAL ENERGY CORP.	1981
		BIOMASS CONV FOR ALCOHOLS, SUGARS, ETC	
H	OCLR	MYCOSEARCH, INC.	1979
		CULTURES OF RARE & NEW FUNGI; LIVE CULTUR	
J	DAC	O.C.S. LABS	1984
		CUSTOM MADE SYNTHETIC GENES & PEPTIDES	
O	C	FERMENTEC CORP	1981
		WHEY CONVERSION PLANT AND FERMENTATION	
R	LC	CYTOX CORPORATION	1975
		WASTE, AG, POLLUTION, ENERGY	
T	PMHC	NEUSHUL MARICULTURE	1978
		ANIT-VIRAL; ENZYMES; MOLLUSCAN SEED & CULT	

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 BIOTECHNOLOGY COMPANIES IN BIOSEPARATIONS (D)

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PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
D	O	BIOCHEM TECHNOLOGY INC	1977
		COMPUTER PRODS & SOFTWARE; NADH DETECTOR	
D	K	BIOMATERIALS INTERNATIONAL, INC	1981
		RAMAN TECH FOR RESPIR APPS; GAS MONITOR	
D		GENTRONIX, INC.	1972
		BIOCHIPS, BIOELECTRONICS	
D	D	INTEGRATED CHEMICAL SENSORS	1984
		INSTRUMENTS AND BIOSENSORS	
E	D	BEND RESEARCH, INCORPORATED	1975
		SEPARATION; BIOSENSORS; IMMOBILIZED ENZYME	
F	DPJQ	BIOTECHNOLOGY DEVELOPMENT CORP	1982
		EQUIPMENT, CONSULTING, REAGENTS	
F	HPD	ENDOTRONICS, INC.	1981
		APS SERIES; ACUSYST-P; VACCINES; BIOLOGICA	
F	SDEH	QUEUE SYSTEMS INC	1980
		CRYO PRESERVATION; CELL CULTURE; ENVIR SEP	
J	SRD	BIOSCIENCE MANAGEMENT INC.	1984
		BACTERIAL CULTURES; INNOCULANTS; INSTRUMEN	
J	DAC	O.C.S. LABS	1984
		CUSTOM MADE SYNTHETIC GENES & PEPTIDES	
K	D	LIFECODES CORP.	1982
		REFERENCE LAB TESTS USING DNA PROBES	
S	IDFR	BIOSPHERICS	1967
		WASTEWATER PROCESS & MONITORS & PILOT PLT	
S	PDK	CYGNUS RESEARCH CORP.	1985
		DRUG DELIV'Y SYST; CONTRACTS TO PHARM COS	

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 BIOTECHNOLOGY COMPANIES IN BIOSEPARATIONS (E)

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PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
E	S	A/G TECHNOLOGY CORP. GAS SEPARATION;ULTRA & MICRO FILTRATION	1981
E	D	BEND RESEARCH, INCORPORATED SEPARATION;BIOSENSORS;IMMOBILIZED ENZYME	1975
E	F	BIOCONSEP, INC. BIOL SEPARATIONS R AND D AND EQUIP	1983
E	KS	BIOPROBE INTERNATIONAL, INC. SPECIALIZED GELS; SEPARATION DEVISE, ETC	1983
E	GVA	PHARMACIA BIOTECHNOLOGY GROUP CHROMA SEPARATION CHEMICALS & INSTRUMENT	1960
F	SDEH	QUEUE SYSTEMS INC CRYO PRESERVATION;CELL CULTURE;ENVIR SEP	1980
G	EHS	ADVANCED BIOTECHNOLOGIES MEDIA, SERA, GROWTH FACTORS	1982
G	FE	AMERICAN QUALEX INTL, INC ANTIBODIES;ENZYMES;DNA-PROBS;INSTURMENTS	1981
G	EF	FLOW LABORATORIES, INC. MEDIA, FERMENT EQUIP, REAGENTS	1961
H	EO	HYCLONE LABORATORIES IMMUNOCHEM;ANIMAL SERA;HYDBRIDOMAS;ETC.	1975
K	E	ADVANCED MAGNETICS, INC. DIAG RIA KITS, MAG SEPARATION RGNTS	1981
K	EFGH	ELECTRO-NUCLEONICS, INC. INTERLEUKIN-2;HTLV-III ANTIBODY TEST	1960
O	E	ENGENICS, INC. STRAIN PROD'N, SEPARATIONS, PROT.PURIF	1981
O	E	ENZYME CENTER INC., THE LG SCALE FERMENT;SEPAR & PURIF OF ENZYME	1978
P	KJGE	GENZYME CORP. BIOLOGICALS FOR HUMAN HEALTH CARE;DIAGN	1981
P	JIBE	LUCKY BIOTECH CORP. IFN, HEPATITIS-B DX,PORCINE GH	1984
P	EFKO	NORTH COAST BIOTECHNOLOGY INC ENZYMES FOR PHARMACEUTICAL MANUFACTURING	1986
S	EGK	INTER-CELL TECHNOLOGIES, INC. BIOLOGICALS;IMMUN'REAGENTS;LYMPHOKINES	1982
W	E	MELOY LABORATORIES, INC. SERVICES;REAGENTS; RESEARCH & DEVELOPMEN	1970

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BIOTECHNOLOGY COMPANIES IN EQUIPMENT (F)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
B	MFG	INTERN'TL PLANT RESEARCH INST. DATE PALMS;GEN ENG REAGENTS;OIL PALMS;ET	1978
B	AVFY	NEOGEN CORP. FOOD, PLANT HEALTH, ANIMAL HEALTH	1981
B	FJK	SEPRACOR, INC. MEMBRANE COLUMNS-ANTI-FACTOR 7 &ANTI-TPA	1984
E	F	BIOCONSEP, INC. BIOL SEPARATIONS R AND D AND EQUIP	1983
F		AN-CON GENETICS EQUIP;INSTRU	1982
F	G	APPLIED BIOSYSTEMS DNA SYNTHESIZER;PEPTIDE SEQUENCER;REAGEN	1981
F	JG	APPLIED PROTEIN TECHNOL. INC INSTRU TO AUTOMAT PEPTIDE & PROTEIN CHEM	1984
F		BIO-RECOVERY, INC. MEMBRANE SYSTEMS FOR FILTRATION	1983
F	IJM	BIO-TECHNICAL RESOURCES, INC. YEAST/BACT PRODS IN FOOD, BREWING,CHEM&C	1962
F	DPJQ	BIOTECHNOLOGY DEVELOPMENT CORP EQUIPMENT, CONSULTING,REAGENTS	1982
F	HPD	ENDOTRONICS, INC. APS SERIES;ACUSYST-P;VACCINES; BIOLOGICA	1981
F		HP GENENCHEM LAB INSTRUM	1983
F		MULTIPLE PEPTIDE SYSTEMS INC EQUIP; COMPLETE HF SYSTEMS; BRAIN SLICER	1986
F	H	NYGENE CORP. BIOAFFINITY SEPARAT SYS;HYBRIDOMA PRODUC	1985
F	SDEH	QUEUE SYSTEMS INC CRYO PRESERVATION;CELL CULTURE;ENVIR SEP	1980
F	G	VEGA BIOTECHNOLOGIES, INC. PEPTIDE SYNTHESIZERS;REAGENTS;ENZYMES SUB	1979
G	FE	AMERICAN QUALEX INTL, INC ANTIBODIES;ENZYMES;DNA-PROBS;INSTURMENTS	1981
G	F	BIOSEARCH, INC. REAGENT CHEMICALS AND GENE/PEPTIDE INSTS	1977
G	EF	FLOW LABORATORIES, INC. MEDIA, FERMENT EQUIP, REAGENTS	1961
G	FX	HAZLETON BIOTECHNOLOGIES GRP LAB REAGENTS AND EQUIPMENT, MEDIA, MABS	1981
G	FJ	PROMEGA BIOTECH REAGENTS FOR MOLECULAR BIOLOGY	1978
G	F	STRATAGENE CLONING SYSTEMS BT REAGENTS	1984
G	F	UNITED STATES BIOCHEMICAL CORP REAGENTS AND EQUIPMENT	1973
G	F	VECTOR LABORATORIES, INC. MOLEC BIOL REAGENTS AND EQUIP.	1976
J	F	LIFECORE, INC HYALURONIC ACID, MEDICAL DEVICES	1975

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BIOTECHNOLOGY COMPANIES IN EQUIPMENT (F)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
K	WF	BIOSTAR MEDICAL PRODUCTS, INC. DIAGNOSTICS & TEST KITS FOR AUTOIMM.DIS	1983
K	GF	DIAGNOSTIC TECHNOLOGY, INC. DIAGNOSTICS, BLOOD TEST KITS, REAGENTS	1980
K	EFGH	ELECTRO-NUCLEONICS, INC. INTERLEUKIN-2; HTLV-III ANTIBODY TEST	1960
K	FG	GEN-PROBE, INC. DNA PROBE TECH FOR RESEARCH & CLINICAL	1984
M	F	CLINICAL BIOTECHNOLOGIES, INC. ENZYMES FOR FOOD PRODS, DAIRY, BREWING	1986
P	EFKO	NORTH COAST BIOTECHNOLOGY INC ENZYMES FOR PHARMACEUTICAL MANUFACTURING	1986
S	IDFR	BIOSPHERICS WASTEWATER PROCESS & MONITORS & PILOT PLT	1967
S	F	GLEN MILLS, INC. OEM; CELL LYING EQUIP; GLASS BEADS.	1980
S	F	INTELLI-GENETICS GENETIC ENGINE SOFTWARE; STRATEGENE	1980
X	HF	CHARLES RIVER BIOTECH. SERVICES MABS, CULTURE SYSTEMS	1983

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BIOTECHNOLOGY COMPANIES IN REAGENTS (G)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
A	GHQ	IMMUCELL CORPORATION 2 HUMAN DX; REAGENTS; 3 ANIMAL DX; 1 VACCIN	1982
B	MFG	INTERN'TL PLANT RESEARCH INST. DATE PALMS; GEN ENG REAGENTS; OIL PALMS; ET	1978
E	GVA	PHARMACIA BIOTECHNOLOGY GROUP CHROMA SEPARATION CHEMICALS & INSTRUMENT	1960
F	G	APPLIED BIOSYSTEMS DNA SYNTHESIZER; PEPTIDE SEQUENCER; REAGEN	1981
F	JG	APPLIED PROTEIN TECHNOL. INC INSTRU TO AUTOMAT PEPTIDE & PROTEIN CHEM	1984
F	G	VEGA BIOTECHNOLOGIES, INC. PEPTIDE SYNTHESIZERS; REAGENTS; ENZYMES SUB	1979
G	EHS	ADVANCED BIOTECHNOLOGIES MEDIA, SERA, GROWTH FACTORS	1982
G	PX	ALFACELL CORPORATION TUMOR TOXINS, REAGENTS, SERA	1981
G	K	AMERICAN BIOCLINICAL REAGENTS; DX KITS;	1977
G		AMERICAN BIONETICS, INC (ABN) ORGANIC & BIOCHEM COMPS	1981
G	FE	AMERICAN QUALEX INTL, INC ANTIBODIES; ENZYMES; DNA-PROBS; INSTRUMENTS	1981
G	X	ATLANTIC ANTIBODIES IMMUNODX TEST KITS; REAGENTS	1973
G	F	BIOSEARCH, INC. REAGENT CHEMICALS AND GENE/PEPTIDE INSTS	1977
G	X	BIOTEST DIAGNOSTICS CORP REAGENTS AND MAB MARKERS	1946
G		CHEMGENES INTERMEDIATES FOR DNA SYNTH	1981
G		CHEMICAL DYNAMICS CORP. DNA TECHNOL REAGENTS, RE'S, ETC.	1972
G	K	CHEMICON INTERNATIONAL, INC MABS; GRWTH FCTRS; MTT KIT	1981
G	KV	CLINICAL SCIENCES, INC. BIOCHEMICALS FOR DIAGNOS AND VET USES	1971
G	X	CLONTECH LABORATORIES, INC. CDNA LIBRARIES, REAGENTS, ETC	1984
G	KP	COLLABORATIVE RESEARCH INC. RESEARCH REAGENTS, PEPTIDES	1961
G	M	CONSOLIDATED BIOTECHNOLOGY, INC ENZYMES, SOME FOOD RELATED RESEARCH	1983
G	K	DIAGNOSTIC PRODUCTS, CORP. DIAGNOSTIC KITS	1972
G	S	EPITOPE, INC. RED CELL & HLA MCS; VIRAL DETEC'N KITS	1979
G	EF	FLOW LABORATORIES, INC. MEDIA, FERMENT EQUIP, REAGENTS	1961
G	FX	HAZLETON BIOTECHNOLOGIES GRP LAB REAGENTS AND EQUIPMENT, MEDIA, MABS	1981

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BIOTECHNOLOGY COMPANIES IN REAGENTS (G)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
G	XWK	INTER-AMERICAN RESEARCH ASC. PURIFIED ANTIGENS, ANTISERA, BLOOD PRODS	1979
G	JX	INTERN'TL ENZYMES, INC. SERUM FREE MEDIA SUPPL;ENZYMES;ANTISERA	1974
G	G	JACKSON IMMUNORESEARCH LAB AFFIN PURIF PROTEINS; PURE PROTEINS	1982
G	JK	MOLECULAR BIOSYSTEMS, INC. DNA PROBES, AIDS SCREENING TEST	1980
G	K	MOLECULAR GENETIC RESOURCES REV.TRANSSCRIPTASE;TERM.TRANSFERASE	1983
G	HKP	MONOCLONETICS INTERNAT'L, INC. HUMAN SCREENING TESTS & DIAGN TESTS	1984
G	JX	PEL-FREEZ BIOLOGICALS, INC. VARIOUS SPECIALTY REAGENTS, MAB SERA,ETC	1911
G	FJ	PROMEGA BIOTECH REAGENTS FOR MOLECULAR BIOLOGY	1978
G	J	SCOTT LABORATORIES REAGENTS AND SPECIALTY CHEMICALS	1981
G	F	STRATAGENE CLONING SYSTEMS BT REAGENTS	1984
G	KX	SUMMA MEDICAL CORP. HISTOCHEMICAL MARKERS AND KITS, CA DX	1978
G	F	UNITED STATES BIOCHEMICAL CORP REAGENTS AND EQUIPMENT	1973
G		UNIVERSITY MICRO REFERENCE LAB BACTERIAL REFERENCE STRAINS	1980
G	F	VECTOR LABORATORIES, INC. MOLEC BIOL REAGENTS AND EQUIP.	1976
G	K	ZYMED LABORATORIES, INC. IMMUNOCHEMICALS	1980
J	HGK	BIOMEDICAL TECHNOLOGIES CELL CULTURE REAGENTS; ANTIBODIES; KITS	1981
J	G	MARCOR DEVELOPMENT CORP. REAGENTS FOR FERMENTATION, ENZYMES	1976
J	G	OMNI BIOCHEM, INC. PEPTIDES;ENZYMES;AMINO ACIDS;REAGENTS.	1986
J	G	PENINSULA LABORATORIES, INC PEPTIDES, ENZYMES, SPECIALTY REAGENTS	1971
K	G	AMERICAN DIAGNOSTICA, INC. T-PA ELISA, T-PA ACTIVE ASSAY KITS, ETC	1983
K	PG	ANTIVIRALS, INC NEU-GENES FOR DIAGN & THERAP USE	1980
K	G	BEHRING DIAGNOSTICS ANTIBDS;REAGENTS-CALBIOCHEM	1952
K	AG	BINAX, INC MABS, DX TEST KITS,VET DX	1986
K	G	CYTOTECH, INC AIDS DIAGNOSTICS, REAGENTS	1982
K	GF	DIAGNOSTIC TECHNOLOGY, INC. DIAGNOSTICS, BLOOD TEST KITS, REAGENTS	1980

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BIOTECHNOLOGY COMPANIES IN REAGENTS (G)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
K	G	DIAMEDIX, INC. DIAGN KITS FOR INFECT & AUTO IMMUN DIS	1986
K	EFGH	ELECTRO-NUCLEONICS, INC. INTERLEUKIN-2;HTLV-III ANTIBODY TEST	1960
K	GP	ENZO BIOCHEM, INC. ENZYMES;LETINS;FILTERS;NUCLEOTIDES;ETC	1976
K	FG	GEN-PROBE, INC. DNA PROBE TECH FOR RESEARCH & CLINICAL	1984
K	PGQ	MUREX CORP. MAB REAGENTS & ANTIBODY KITS	1984
K	XG	RESEARCH&DIAGNOSTIC ANTIBODIES DIAGNOSTIC KITS, MAB REAGENTS	1985
P	GHJ	AMERICAN BIOTECHNOLOGY CO GROWTH FACTORS	1984
P	AJKG	AMGEN RESEARCH REAGENTS EGF, IGF, IFN, ETC.	1980
P	QGJ	BIOGEN HEPATITIS B CORE ANTIGEN	1979
P	JG	CENTOCOR DIAGNOSTIC BLOOD TESTS FOR CANCER & HEPB	1979
P	KJGE	GENZYME CORP. BIOLOGICALS FOR HUMAN HEALTH CARE;DIAGN	1981
P	AG	IMMUNEX CORP. IL-2; GM-CSF; IL-1; IL-1BETA;LYMPHOKINES	1981
P	AGKH	IMMUNO MODULATORS LABS. INC INTERFERONS;AIDS TH;COSMETICS;HCG;ETC.	1981
P	SGL	IMMUNOMEDICS, INC. AUTOIMM DIS ASSAY;ALLERGY PRODS;TUMOR MK	1983
P	GHB	INTERFERON SCIENCES, INC. INTERFERON	1981
P	AGKQ	RIBI IMMUNOCHEM RESEARCH, INC. VET-ANTI-TUMOR PROD;VET DX; VET VACCINES	1981
P	JG	SCRIPPS LABORATORIES BULK HUMAN PROTEINS;HORMONES;ENZYMES	1980
P	KG	T-CELL SCIENCES 6 MABS; 1 CELLFREE SANDWICH ASSAY KIT	1983
P	KG	TRITON BIOSCIENCES, INC. REAGENTS FOR CA & HISTOPATH RES;DX PRODS	1983
S	GH	BERKELEY ANTIBODY DEVELOP CUSTON ANTIBODIES MAB & POLYCLON	1983
S	EGK	INTER-CELL TECHNOLOGIES, INC. BIOLOGICALS;IMMUN'REAGENTS;LYMPHOKINES	1982
W	KG	BIONETICS RESEARCH CLINICAL DIAGNOSTICS;RESEARCH REAGENTS	1986
W	PG	CREATIVE BIOMOLECULES PEPTIDES, CONTRACT R AND D, TPA, EGF, &C	1981
X	G	BIOPRODUCTS FOR SCIENCE, INC. ANTIBODIES;ANTIGEN MARKERS;REAGENTS	1985
X	G	SERAGEN, INC R & D IMMUNOLOGICS, REAGENTS, ANTISERA, ETC	1979

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BIOTECHNOLOGY COMPANIES IN CELL CULTURE (H)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
A	GHQ	IMMUCELL CORPORATION 2 HUMAN DX; REAGENTS; 3 ANIMAL DX; 1 VACCIN	1982
B	HSJM	NPI POTATO & FLOWER SEEDS; SOIL INNOCUL; SEEDS	1973
F	HPD	ENDOTRONICS, INC. APS SERIES; ACUSYST-P; VACCINES; BIOLOGICA	1981
F	H	NYGENE CORP. BIOAFFINITY SEPARAT SYS; HYBRIDOMA PRODUC	1985
F	SDEH	QUEUE SYSTEMS INC CRYO PRESERVATION; CELL CULTURE; ENVIR SEP	1980
G	EHS	ADVANCED BIOTECHNOLOGIES MEDIA, SERA, GROWTH FACTORS	1982
G	HKP	MONOCLONETICS INTERNAT'L, INC. HUMAN SCREENING TESTS & DIAGN TESTS	1984
H	K	BIONIQUE LABS INC. CULTUR CHAMBER; MYCOPLASMA DETEC SYST; DIA	1982
H	EO	HYCLONE LABORATORIES IMMUNOCHEM; ANIMAL SERA; HYDBRIDOMAS; ETC.	1975
H		IN VITRO INTERNATIONAL, INC. TYPE CULTURE DEPOSITORY	1982
H		KARYON TECHNOLOGY, LTD. TISSUE PROCESS CULTURE TECHNOLOGY	1984
H	OCLR	MYCOSEARCH, INC. CULTURES OF RARE & NEW FUNGI; LIVE CULTUR	1979
J	HGK	BIOMEDICAL TECHNOLOGIES CELL CULTURE REAGENTS; ANTIBODIES; KITS	1981
K	EFGH	ELECTRO-NUCLEONICS, INC. INTERLEUKIN-2; HTLV-III ANTIBODY TEST	1960
M	BHJ	CYANOTECH CORPORATION PHYCOBILIPROTEIN; SPIRULINA; B-CAROTENE; ..	1983
P	GHJ	AMERICAN BIOTECHNOLOGY CO GROWTH FACTORS	1984
P	WH	DNAX RESEARCH SUB OF SP; NO PRODUCTION AT ALL	1980
P	H	HANA BIOLOGICS, INC. CELL IMPLANTS TO TREAT DISEASE	1979
P	AGKH	IMMUNO MODULATORS LABS. INC INTERFERONS; AIDS TH; COSMETICS; HCG; ETC.	1981
P	GHB	INTERFERON SCIENCES, INC. INTERFERON	1981
Q	HP	IMMUNOMED IMMUNOTHERAPEUTICS	1979
S	GH	BERKELEY ANTIBODY DEVELOP CUSTON ANTIBODIES MAB & POLYCLON	1983
S	HJ	BIOPOLYMERS, INC. CELL & TISSUE ADHESIVE; OPHTHAL ADHESIVE	1984
S	H	COLLAGEN CORPORATION MEDICAL DEVICES; COLLAGEN IMPLANT; TISS CU	1975
T	PMHC	NEUSHUL MARICULTURE ANIT-VIRAL; ENZYMES; MOLLUSCAN SEED & CULT	1978

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BIOTECHNOLOGY COMPANIES IN CELL CULTURE (H)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
W	HKQ	LEE BIOMOLECULAR RESEARCH LABS INTERFERONS;ANTI-INTERFERON SERA;	1980
X	HF	CHARLES RIVER BIOTECH.SERVICES MABS, CULTURE SYSTEMS	1983

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 BIOTECHNOLOGY COMPANIES IN COMMODITY CHEMICALS (I)

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PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
B	IJ	ZOECON CORP. (SANDOZ CROP PRO) PLANT IMPROVEMENT AND AG CHEMICALS	1968
C	LI	BIOLOGICAL ENERGY CORP. BIOMASS CONV FOR ALCOHOLS, SUGARS, ETC	1981
F	IJM	BIO-TECHNICAL RESOURCES, INC. YEAST/BACT PRODS IN FOOD, BREWING, CHEM&C	1962
I	JBLO	AMERICAN BIOGENETICS CORP PROCESS DESIGN MICROORGANISMS-CHEMICALS	1984
I	K	BIOASSAY SYSTEMS CORP. ANAL., PURIF, TESTING OF PEPTIDES; DIAGN	1977
I	JO	GENEX INC. COMMOD AND SPEC. CHEMICALS; DRAIN CLEANER	1977
P	JIBE	LUCKY BIOTECH CORP. IFN, HEPATITIS-B DX, PORCINE GH	1984
S	IDFR	BIOSPHERICS WASTEWATER PROCESS & MONITORS & PILOT PLT	1967
S	JI	INFERGENE COMPANY BAKING & BREWING STRAINS; GLUCOANALYSE STR	1983

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 BIOTECHNOLOGY COMPANIES IN SPECIALTY CHEMICALS (J)

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PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
A	JQ	SYNTRO CORP. ANIMAL VACCINES & DX;ANIMAL HEALTH PRODS	1981
B	J	ADVANCED GENETIC SCIENCES RESEARCH FOR AGRI, FROSTBAN, SNOMAX	1979
B	JO	BENTECH LABORATORIES YIELD ENHANCING AGENT;ANTIFUNGAL;HEALING	1984
B	HSJM	NPI POTATO & FLOWER SEEDS;SOIL INNOCUL;SEEDS	1973
B	FJK	SEPRACOR, INC. MEMBRANE COLUMNS-ANTI-FACTOR 7 &ANTI-TPA	1984
B	IJ	ZOECON CORP. (SANDOZ CROP PRO) PLANT IMPROVEMENT AND AG CHEMICALS	1968
F	JG	APPLIED PROTEIN TECHNOL. INC INSTRU TO AUTOMAT PEPTIDE & PROTEIN CHEM	1984
F	IJM	BIO-TECHNICAL RESOURCES, INC. YEAST/BACT PRODS IN FOOD, BREWING,CHEM&C	1962
F	DPJQ	BIOTECHNOLOGY DEVELOPMENT CORP EQUIPMENT, CONSULTING,REAGENTS	1982
G	JX	INTERN'TL ENZYMES, INC. SERUM FREE MEDIA SUPPL;ENZYMES;ANTISERA	1974
G	JK	MOLECULAR BIOSYSTEMS, INC. DNA PROBES, AIDS SCREENING TEST	1980
G	JX	PEL-FREEZ BIOLOGICALS, INC. VARIOUS SPECIALTY REAGENTS, MAB SERA,ETC	1911
G	FJ	PROMEGA BIOTECH REAGENTS FOR MOLECULAR BIOLOGY	1978
G	J	SCOTT LABORATORIES REAGENTS AND SPECIALTY CHEMICALS	1981
I	JBLO	AMERICAN BIOGENETICS CORP PROCESS DESIGN MICROORGANISMS-CHEMICALS	1984
I	JO	GENEX INC. COMMOD AND SPEC. CHEMICALS;DRAIN CLEANER	1977
J	HGK	BIOMEDICAL TECHNOLOGIES CELL CULTURE REAGENTS; ANTIBODIES; KITS	1981
J	SRD	BIOSCIENCE MANAGEMENT INC. BACTERIAL CULTURES;INNOCULANTS;INSTRUMEN	1984
J		CALZYME LABORATORIES,INC. ENZYMES & BIOCHEMICALS	1983
J		DELTOWN CHEMURGIC CORP. PEPTONES AND HYDROLASES FOR PHARMA,CHEM	1968
J	M	GENENCOR, INC. FOOD PROCESS AND CHEMICAL ENZYMES	1982
J		INCELL CORPORATION PEPTIDE HORMONES;RES-YEAST & FUNGAL GENE	1981
J	F	LIFECORE, INC HYALURONIC ACID, MEDICAL DEVICES	1975
J	P	LIPOSOME COMPANY INC. LIPOSOMES FOR DRUG DELIV AND THERAPEUTIC	1981
J	VBP	LIPOSOME TECHNOLOGY LIPOSOMES FOR PHARM, VET, AG, ETC	1981

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 BIOTECHNOLOGY COMPANIES IN SPECIALTY CHEMICALS (J)

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PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
J	G	MARCOR DEVELOPMENT CORP. REAGENTS FOR FERMENTATION, ENZYMES	1976
J	RPO	MICROBIC RESOURCES FOOD ADDITIVES & COLORANTS;SPECIAL CHEMS	1981
J	DAC	O.C.S. LABS CUSTOM MADE SYNTHETIC GENES & PEPTIDES	1984
J	G	OMNI BIOCHEM, INC. PEPTIDES;ENZYMES;AMINO ACIDS;REAGENTS.	1986
J	G	PENINSULA LABORATORIES, INC PEPTIDES, ENZYMES, SPECIALTY REAGENTS	1971
J		REPLIGEN CORP. ENXYMES, PROTEINS,RECOMB PROT A, HTLVIII	1981
J	X	SOUTHERN BIOTECH ASSOCIATES PRODUCE COLLAGEN AND ANTIBODIES TO IT	1982
J	J	WESTBRIDGE RESEARCH GROUP PLANT GRWTH REGULAT;WATER TREAT'T;ANIMAL	1982
K	J	IMMUNOTECH CORP. IMMUNODAGNOSTIC TEST KITS	1980
K	YJ	PROTATEK INTERNATIONAL, INC. VIRUS, TEST KITS, SPECIALIZED MICROBES	1985
K	JX	UNITED BIOMEDICAL INC DIAGNOSTICS, MABS, SPECIALTY PROTEINS	1984
L	J	PETROFERM USA MICROBIALS FOR IMPROVED FUELS	1977
M	OJ	COORS BIOTECH PRODUCTS CO. INDUS DEGREASER; FOOD PRODS; SPECIA CHEM	1984
M	BHJ	CYANOTECH CORPORATION PHYCOBILIPROTEIN;SPIRULINA;B-CAROTENE;..	1983
O	JPX	BIOPURE CUSTOM FERM. OF THERAP, MAB,CHEMICALS	1984
P	GHJ	AMERICAN BIOTECHNOLOGY CO GROWTH FACTORS	1984
P	AJKG	AMGEN RESEARCH REAGENTS EGF, IGF, IFN, ETC.	1980
P	QGJ	BIOGEN HEPATITIS B CORE ANTIGEN	1979
P	JG	CENTOCOR DIAGNOSTIC BLOOD TESTS FOR CANCER & HEPB	1979
P	JAQX	GENENTECH INSULIN, HGH, TPA, HSA, IF, ENZYMES	1976
P	KJGE	GENZYME CORP. BIOLOGICALS FOR HUMAN HEALTH CARE;DIAGN	1981
P	J	INGENE, INC. BONE &CARTL HEAL;CA THER;SWEETENERS	1980
P	JIBE	LUCKY BIOTECH CORP. IFN, HEPATITIS-B DX,PORCINE G%	1984
P	JG	SCRIPPS LABORATORIES BULK HUMAN PROTEINS;HORMONES;ENZYMES	1980
P	AJ	UNIGENE LABORATORIES, INC. NONE RESEARCH ON PEPTIDE HORMONES, ENZYM	1980

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BIOTECHNOLOGY COMPANIES IN SPECIALTY CHEMICALS (J)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
S	HJ	BIOPOLYMERS, INC. CELL & TISSUE ADHESIVE; OPHTHAL ADHESIVE	1984
S	KJ	E-Y LABORATORIES, INC ANTISERA; CARB RECOGN FACTR; REAGENT; DIAGN	1978
S	JI	INFERGENE COMPANY BAKING & BREWING STRAINS; GLUCOAMALYSE STR	1983
T	JP	OCEAN GENETICS SPEC CHEMS & PHARMACEUT OF MARINE ALGAE	1981
V	J	ALLELIC BIOSYSTEMS VET TOX TESTS, PROBES, OLIGOS, REAGENTS	1984
W	KJ	XENOGEN RDNA RESEARCH FOR DIAGNOS AND CHEMICALS	1981

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 BIOTECHNOLOGY COMPANIES IN CLINICAL DIAGNOSTICS (K)

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PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
A	K	DIAGNON CORP. ASSAYS-FERRITIN,B12/FOLATE,HERPES,VIR TR	1981
A	BK	MOLECULAR GENETICS, INC AG AND VET PRODS, SCOURS VACCINE;DXS	1979
B	K	AGDIA, INC. PLANT AND FOOD TOX DX FOR VIRUSES	1981
B	KACM	BIOTECHNICA INTERNATIONAL DIAG TEST; INNOCULANT, LITE BEER, ETC	1981
B	FJK	SEPRACOR, INC. MEMBRANE COLUMNS-ANTI-FACTOR 7 &ANTI-TPA	1984
D	K	BIOMATERIALS INTERNATIONAL, INC RAMAN TECH FOR RESPIR APPS; GAS MONITOR	1981
E	KS	BIOPROBE INTERNATIONAL, INC. SPECIALIZED GELS; SEPARATION DEVISE, ETC	1983
G	K	AMERICAN BIOCLINICAL REAGENTS;DX KITS;	1977
G	K	CHEMICON INTERNATIONAL, INC MABS; GRWTH FCTRS;MTT KIT	1981
G	KV	CLINICAL SCIENCES, INC. BIOCHEMICALS FOR DIAGNOS AND VET USES	1971
G	KP	COLLABORATIVE RESEARCH INC. RESEARCH REAGENTS, PEPTIDES	1961
G	K	DIAGNOSTIC PRODUCTS, CORP. DIAGNOSTIC KITS	1972
G	XWK	INTER-AMERICAN RESEARCH ASC. PURIFIED ANTIGENS, ANTISERA, BLOOD PRODS	1979
G	JK	MOLECULAR BIOSYSTEMS, INC. DNA PROBES, AIDS SCREENING TEST	1980
G	K	MOLECULAR GENETIC RESOURCES REV.TRANSSCRIPTASE;TERM.TRANSFERASE	1983
G	HKP	MONOCLONETICS INTERNAT'L, INC. HUMAN SCREENING TESTS & DIAGN TESTS	1984
G	KX	SUMMA MEDICAL CORP. HISTOCHEMICAL MARKERS AND KITS, CA DX	1978
G	K	ZYMED LABORATORIES, INC. IMMUNOCHEMICALS	1980
H	K	BIONIQUE LABS INC. CULTUR CHAMBER;MYCOPLASMA DETEC SYST;DIA	1982
I	K	BIOASSAY SYSTEMS CORP. ANAL., PURIF, TESTING OF PEPTIDES;DIAGN	1977
J	HGK	BIOMEDICAL TECHNOLOGIES CELL CULTURE REAGENTS; ANTIBODIES; KITS	1981
K	E	ADVANCED MAGNETICS, INC. DIAG RIA KITS, MAG SEPARATION RGNTS	1981
K	B	AGRI-DIAGNOSTICS ASSOCIATES TURF & CROP DISEASE DIAGNOSTIC KITS	1984
K		AGRITECH SYSTEMS, INC IMMUNOASSAYS	1984
K	G	AMERICAN DIAGNOSTICA, INC. T-PA ELISA, T-PA ACTIVE ASSAY KITS, ETC	1983

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BIOTECHNOLOGY COMPANIES IN CLINICAL DIAGNOSTICS (K)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
K		ANGENICS	1980
		SCREENING TESTS FOR MILK AND DRUG ABUSE	
K	PG	ANTIVIRALS, INC	1980
		NEU-GENES FOR DIAGN & THERAP USE	
K		APPLIED GENETICS LABS. INC.	1984
		GENETIC TOX TEST	
K	G	BEHRING DIAGNOSTICS	1952
		ANTIBDS; REAGENTS-CALBIOCHEM	
K	AG	BINAX, INC	1986
		MABS, DX TEST KITS, VET DX	
K		BIOCLINICAL SYSTEMS, INC	
		DIAGNOSTICS	
K	P	BIOGENEX LABORATORIES	1981
		DIAGN TESTS-RIA; IMM'HIS'CHEM; KITS; REAGEN	
K	WF	BIOSTAR MEDICAL PRODUCTS, INC.	1983
		DIAGNOSTICS & TEST KITS FOR AUTOIMM.DIS	
K	P	BIOTECH RESEARCH LABS, INC	1973
		MABS FOR DIAGNOSTICS, IL-2	
K		BIO THERM	1986
		DIAGNOSTICS	
K		BRAIN RESEARCH INC.	1968
		CANCER DIAGNOSTICS	
K		BREIT LABORATORIES	1983
		MAB BASED DISPOSABLE MEDICAL DIAGNOSTICS	
K		CALIFORNIA INTEGRATED DIAGNOST	1981
		MAB TEST KITS FOR DIAG OF SEX TRAN DIS	
K	QP	CAMBRIDGE BIOSCIENCE CORP.	1981
		DX KITS FOR AIDS, ADENOVIRUS, ROTAVIRUS	
K		CHARLES	1982
		DIPSTIK DIAGNOS TESTS KITS	
K		CHIMERIX	1983
		CLINICAL TESTING PRODS RESEARCH	
K		COVALENT TECHNOLOGY CORP.	1981
		RAPID DIAGN ASSAY FOR STDs	
K	PX	CYTOGEN CORP	1980
		THERAPEUTIC MABS AND DIAGNOST.	
K	G	CYTOTECH, INC	1982
		AIDS DIAGNOSTICS, REAGENTS	
K	GF	DIAGNOSTIC TECHNOLOGY, INC.	1980
		DIAGNOSTICS, BLOOD TEST KITS, REAGENTS	
K	G	DIAMEDIX, INC.	1986
		DIAGN KITS FOR INFECT & AUTO IMMUN DIS	
K	EFGH	ELECTRO-NUCLEONICS, INC.	1960
		INTERLEUKIN-2; HTLV-III ANTIBODY TEST	
K	GP	ENZO BIOCHEM, INC.	1976
		ENZYMES; LETINS; FILTERS; NUCLEOTIDES; ETC	
K		GAMETRICS, LTD.	1974
		HUMAN CHILD SEX SELECT, ISOLAT X/Y SPERM	
K		GAMMA BIOLOGICALS, INC.	1969
		REAGENT-BASED DX TESTS FOR HUMAN BL SERA	

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 BIOTECHNOLOGY COMPANIES IN CLINICAL DIAGNOSTICS (K)

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PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
K	FG	GEN-PROBE, INC. DNA PROBE TECH FOR RESEARCH & CLINICAL	1984
K	K	GENESIS LABS, INC. BLOOD GLUCOSE TEST; THERAP DRUG MONITOR	1984
K	AQ	GENETIC DIAGNOSTICS CORP. DIAGNOSTIC TEST KITS	1981
K	P	GENETIC SYSTEMS CORP. MAB BASED HUMAN DIAGNOST AND THERAPEUT	1980
K		HYGEIA SCIENCES OVULATION PREDICTOR; PREGNANCY TEST KITS	1980
K	J	IMMUNOTECH CORP. IMMUNODIAGNOSTIC TEST KITS	1980
K	K	KALLESTAD LABORATORIES DIAGNOSTIC PRODUCTS	1967
K	D	LIFECODES CORP. REFERENCE LAB TESTS USING DNA PROBES	1982
K	K	MICROGENICS DX ASSAYS; DIGOXIN ASSAY	1981
K	P	MOLECULAR DIAGNOSTICS, INC. NONE, LICENSES ALL COMMERCIALIZATION	1980
K		MONOCLONAL ANTIBODIES, INC. DIAGNOSTIC TEST KITS	1979
K	PGQ	MUREX CORP. MAB REAGENTS & ANTIBODY KITS	1984
K	P	NMS PHARMACEUTICALS DIAGNOSTICS AND PHARMACEUTICALS	1971
K	X	NUCLEAR & GENETIC TECHNOLOGY RADIOLABELED MABS FOR CANCER DX	1980
K	PX	ONCOGENE SCIENCE, INC ONCOGENE PROBS FOR DX AND THERAP, MABS	1983
K	YJ	PROTATEK INTERNATIONAL, INC. VIRUS, TEST KITS, SPECIALIZED MICROBES	1985
K	K	RECOMTEX CORP. GENETIC DX	1981
K	XG	RESEARCH&DIAGNOSTIC ANTIBODIES DIAGNOSTIC KITS, MAB REAGENTS	1985
K	QPS	SYNBIOTICS CORP. VET DX; HUMAN DX; VACCINES;	1982
K	K	SYVA CO DX PRODS; TH DRUG MONIT; DRG ABU/TOX; STDS	1966
K		TECHNICLONE INTERNATIONAL, INC ..	1981
K		THREE-M(3M) DIAGNOSTIC SYSTEMS DIAGNOSTICS	1981
K	JX	UNITED BIOMEDICAL INC DIAGNOSTICS, MABS, SPECIALTY PROTEINS	1984
O	MK	ENZYME TECHNOLOGY CORP. GLOCOAMYLASE ENZYME; A-AMYLASE ENZYME	1981
P	QK	ALPHA I BIOMEDICALS PEPTIDES TO PREV, DIAG & TREAT IMMUNE DEFIC	1982

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BIOTECHNOLOGY COMPANIES IN CLINICAL DIAGNOSTICS (K)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
P	KMO	AMERICAN LABORATORIES, INC RAW MATERIALS OF BIOTECHNOLOGY PRODUCTS	1962
P	AJKG	AMGEN RESEARCH REAGENTS EGF, IGF, IFN, ETC.	1980
P	KV	BIOTECHNOLOGY GENERAL CORP. SOD, BGH, HGH	1980
P	AKQ	CALIFORNIA BIOTECHNOLOGY INC. QUESTIONNAIRE STATES ZERO PRODUCTS	1981
P	BK0A	CETUS CORPORATION INTERFERON; INTERLEUKIN-2; MAB; ANTI-NEOPL	1971
P	QK	CHIRON CORPORATION DIAGN FOR AIDS; DNA PROBE DIAGN; WOUND HEA	1981
P	K	COOPER DEVELOPMENT CO. ALPHA1 ANTITRYPSIN, DRUGS, MABS, ETC	1980
P	KJCE	GENZYME CORP. BIOLOGICALS FOR HUMAN HEALTH CARE; DIAGN	1981
P	AGKH	IMMUNO MODULATORS LABS. INC INTERFERONS; AIDS TH; COSMETICS; HCG; ETC.	1981
P	KA	INTEGRATED GENETICS, INC. DX DNA PROBES-SALMONELLA, GENETIC DIS	1981
P	KQX	INTERLEUKIN-2 LYMPHOKINES; AIDS VACCINE; INTERLEUKIN 1,2	1983
P	K	NEORX CORP. MELANOMA IMAGING AGENT-TECHNETIUM	1984
P	EFKO	NORTH COAST BIOTECHNOLOGY INC ENZYMES FOR PHARMACEUTICAL MANUFACTURING	1986
P	K	PHARMATEC, INC DRUG DEL'Y OF SYNTHETICS THRU BB BARRIER	1982
P	K	QUIDEL DX ASSAYS-PREG, FERT, STREP-A, ALLERY, INFEC	1981
P	AGKQ	RIBI IMMUNOCHEM RESEARCH, INC. VET-ANTI-TUMOR PROD; VET DX; VET VACCINES	1981
P	KX	SERONO LABS DRUGS AND DXS IN FERTIL, GRWTH, IMMUN, VIRO	1971
P	KG	T-CELL SCIENCES 6 MABS; 1 CELLFREE SANDWICH ASSAY KIT	1983
P	KG	TRITON BIOSCIENCES, INC. REAGENTS FOR CA & HISTOPATH RES; DX PRODS	1983
Q	XPK	PRAXIS BIOLOGICS VACCINES, TEST KITS, THERAPEUTICS	1983
S	KA	BETHYL LABS INC. ANTISERA & CUSTOM ANTISERA SERVICE	1977
S	PDK	CYGNUS RESEARCH CORP. DRUG DELIV'Y SYST; CONTRACTS TO PHARM COS	1985
S	KJ	E-Y LABORATORIES, INC ANTISERA; CARB RECOGN FACTR; REAGENT; DIAGN	1978
S	EGK	INTER-CELL TECHNOLOGIES, INC. BIOLOGICALS; IMMUN'REAGENTS; LYMPHOKINES	1982
V	K	ANTIBODIES, INC. VET DX	1961

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 BIOTECHNOLOGY COMPANIES IN CLINICAL DIAGNOSTICS (K)

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PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
V	QK	APPLIED BIOTECHNOLOGY VET VACCINES; HUMAN VACCINES & DX	1984
V	QK	BIOLOGICS CORP PSEUDORABIES VACCINE	1966
V	KP	CODON VET VACCINES, HUMAN DIAGNOST,	1980
W	KG	BIONETICS RESEARCH CLINICAL DIAGNOSTICS; RESEARCH REAGENTS	1986
W	HKQ	LEE BIOMOLECULAR RESEARCH LABS INTERFERONS; ANTI-INTERFERON SERA;	1980
W	KJ	XENOGEN RDNA RESEARCH FOR DIAGNOS AND CHEMICALS	1981
X	K	DAKO CORP POLY AND MONO AB'S, CLIN TEST KITS, PROTS	1979

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 BIOTECHNOLOGY COMPANIES IN ENERGY (L)

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PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
C	LI	BIOLOGICAL ENERGY CORP. BIOMASS CONV FOR ALCOHOLS, SUGARS, ETC	1981
H	OCLR	MYCOSEARCH, INC. CULTURES OF RARE & NEW FUNGI;LIVE CULTUR	1979
I	JBLO	AMERICAN BIOGENETICS CORP PROCESS DESIGN MICROORGANISMS-CHEMICALS	1984
L	J	PETROFERM USA MICROBIALS FOR IMPROVED FUELS	1977
L		PETROGEN INC. MICROBES FOR IMPROVED OIL REVOV.	1980
P	SGL	IMMUNOMEDICS, INC. AUTOIMM DIS ASSAY;ALLERGY PRODS;TUMOR MK	1983
R	LC	CYTOX CORPORATION WASTE, AG, POLLUTION, ENERGY	1975

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BIOTECHNOLOGY COMPANIES IN FOOD PRODUCTION/PROCESSING (M)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
A	M	GRANADA GENETICS CORP. BULL GENETICS, SHRIMP, FOOD	1979
A	MV	INTERN'TL MINERAL & CHEMICAL ANIMAL GROWTH, HEALTH AND, NUTRITION	1970
B	KACM	BIOTECHNICA INTERNATIONAL DIAG TEST; INNOCULANT, LITE BEER, ETC	1981
B	M	DNA PLANT TECHNOLOGY CORP. FOODS AND PLANTS, AGRICULTURAL PRODS	1981
B	MFG	INTERN'TL PLANT RESEARCH INST. DATE PALMS;GEN ENG REAGENTS;OIL PALMS;ET	1978
B	HSJM	NPI POTATO & FLOWER SEEDS;SOIL INNOCUL;SEEDS	1973
B	M	PLANT GENETICS, INC. POTATO TR;HYBRID VEGS	1981
F	IJM	BIO-TECHNICAL RESOURCES, INC. YEAST/BACT PRODS IN FOOD, BREWING,CHEM&C	1962
G	M	CONSOLIDATED BIOTECHNOLOGY, INC ENZYMES, SOME FOOD RELATED RESEARCH	1983
J	M	GENENCOR, INC. FOOD PROCESS AND CHEMICAL ENZYMES	1982
M		BIOTICS RESEARCH CORPORATION NUTRITIONAL SUPPLEMENTS	1975
M	F	CLINICAL BIOTECHNOLOGIES, INC. ENZYMES FOR FOOD PRODS,DAIRY,BREWING	1986
M	OJ	COORS BIOTECH PRODUCTS CO. INDUS DEGREASER; FOOD PRODS; SPECIA CHEM	1984
M		CORNING BIOMEDICAL RESEARCH HIGH FRUCTOSE CORN SYRUP, FOODS	1984
M	BHJ	CYANOTECH CORPORATION PHYCOBILIPROTEIN;SPIRULINA;B-CAROTENE;..	1983
M	AB	IDETEK, INC. DX TEST KITS FOR FOOD & AGRICULTURE	1983
M	O	IGENE BIOTECHNOLOGY INC. TM-MINRALAC;MACROMIN;WEYCO-SERV;ETC.	1981
O	MK	ENZYME TECHNOLOGY CORP. GLOCOAMYLASE ENZYME; A-AMYLASE ENZYME	1981
P	KMO	AMERICAN LABORATORIES, INC RAW MATERIALS OF BIOTECHNOLOGY PRODUCTS	1962
R	M	ADVANCED MINERAL TECHNOLOGIES WASTE TREAT & METAL RECOVER	1982
S	BAM	RICERCA, INC FERMENTATION AND RESEARCH	1986
T	PMHC	NEUSHUL MARICULTURE ANIT-VIRAL;ENZYMES;MOLLUSCAN SEED & CULT	1978

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BIOTECHNOLOGY COMPANIES IN PRODUCTION/FERMENTATION (O)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
B	JO	BENTECH LABORATORIES YIELD ENHANCING AGENT; ANTIFUNGAL; HEALING	1984
D	O	BIOCHEM TECHNOLOGY INC COMPUTER PRODS & SOFTWARE; NADH DETECTOR	1977
H	EO	HYCLONE LABORATORIES IMMUNOCHEM; ANIMAL SERA; HYBRIDOMAS; ETC.	1975
H	OCLR	MYCOSEARCH, INC. CULTURES OF RARE & NEW FUNGI; LIVE CULTUR	1979
I	JBLO	AMERICAN BIOGENETICS CORP PROCESS DESIGN MICROORGANISMS-CHEMICALS	1984
I	JO	GENEX INC. COMMOD AND SPEC. CHEMICALS; DRAIN CLEANER	1977
J	RFO	MICROBIO RESOURCES FOOD ADDITIVES & COLORANTS; SPECIAL CHEMS	1981
M	OJ	COORS BIOTECH PRODUCTS CO. INDUS DEGREASER; FOOD PRODS; SPECIA CHEM	1984
M	O	IGENE BIOTECHNOLOGY INC. TM-MINRALAC; MACROMIN; WEYCO-SERV; ETC.	1981
O	B	BALL BIOTECH COMPANY PLANT VARIETIES	1985
O	JPX	BIOPURE CUSTOM FERM. OF THERAP, MAB, CHEMICALS	1984
O	E	ENGENICS, INC. STRAIN PROD'N, SEPARATIONS, PROT. PURIF	1981
O	E	ENZYME CENTER INC., THE LG SCALE FERMENT; SEPAR & PURIF OF ENZYME	1978
O	MK	ENZYME TECHNOLOGY CORP. GLOCOAMYLASE ENZYME; A-AMYLASE ENZYME	1981
O	C	FERMENTEC CORP WHEY CONVERSION PLANT AND FERMENTATION	1981
O		TECHNOMETRICS, INC. ROTATING DRUM REACTOR-CONTINUOUS FERMENT	1982
O		VERAX CORP. LARGE SCALE CELL CULTURING PROD MODEL	1979
P	KMO	AMERICAN LABORATORIES, INC RAW MATERIALS OF BIOTECHNOLOGY PRODUCTS	1962
P	EFKO	NORTH COAST BIOTECHNOLOGY INC ENZYMES FOR PHARMACEUTICAL MANUFACTURING	1986
T	BO	R & A PLANT/SOIL INC. ALGAL SOIL CONDITIONERS, FERTILIZERS, ETC	1978

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BIOTECHNOLOGY COMPANIES IN THERAPEUTICS (P)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
F	DPJQ	BIOTECHNOLOGY DEVELOPMENT CORP EQUIPMENT, CONSULTING, REAGENTS	1982
F	HPD	ENDOTRONICS, INC. APS SERIES; ACUSYST-P; VACCINES; BIOLOGICA	1981
G	PX	ALFACELL CORPORATION TUMOR TOXINS, REAGENTS, SERA	1981
G	KP	COLLABORATIVE RESEARCH INC. RESEARCH REAGENTS, PEPTIDES	1961
G	HKP	MONOCLONETICS INTERNAT'L, INC. HUMAN SCREENING TESTS & DIAGN TESTS	1984
J	P	LIPOSOME COMPANY INC. LIPOSOMES FOR DRUG DELIV AND THERAPEUTIC	1981
J	VBP	LIPOSOME TECHNOLOGY LIPOSOMES FOR PHARM, VET, AG, ETC	1981
J	RPO	MICROBIO RESOURCES FOOD ADDITIVES & COLORANTS; SPECIAL CHEMS	1981
K	PG	ANTIVIRALS, INC NEU-GENES FOR DIAGN & THERAP USE	1980
K	P	BIOGENEX LABORATORIES DIAGN TESTS-RIA; IMM'HIS'CHEM; KITS; REAGEN	1981
K	P	BIOTECH RESEARCH LABS, INC MABS FOR DIAGNOSTICS, IL-2	1973
K	QP	CAMBRIDGE BIOSCIENCE CORP. DX KITS FOR AIDS, ADENOVIRUS, ROTAVIRUS	1981
K	PX	CYTOGEN CORP THERAPEUTIC MABS AND DIAGNOST.	1980
K	GP	ENZO BIOCHEM, INC. ENZYMES; LETINS; FILTERS; NUCLEOTIDES; ETC	1976
K	P	GENETIC SYSTEMS CORP. MAB BASED HUMAN DIAGNOST AND THERAPEUT	1980
K	P	MOLECULAR DIAGNOSTICS, INC. NONE, LICENSES ALL COMMERCIALIZATION	1980
K	PGQ	MUREX CORP. MAB REAGENTS & ANTIBODY KITS	1984
K	P	NMS PHARMACEUTICALS DIAGNOSTICS AND PHARMACEUTICALS	1971
K	PX	ONCOGENE SCIENCE, INC ONCOGENE PROBS FOR DX AND THERAP, MABS	1983
K	QPS	SYNBIOTICS CORP. VET DX; HUMAN DX; VACCINES;	1982
O	JPX	BIOPURE CUSTOM FERM. OF THERAP, MAB, CHEMICALS	1984
P	QK	ALPHA I BIOMEDICALS PEPTIDES TO PREV, DIAG & TREAT IMMUNEDEFIC	1982
P	GHJ	AMERICAN BIOTECHNOLOGY CO GROWTH FACTORS	1984
P	KMO	AMERICAN LABORATORIES, INC RAW MATERIALS OF BIOTECHNOLOGY PRODUCTS	1962
P	AJKG	AMGEN RESEARCH REAGENTS EGF, IGF, IFN, ETC.	1980

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BIOTECHNOLOGY COMPANIES IN THERAPEUTICS (P)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
P		AUTOMEDIX SCIENCES, INC NONE AS YET, STAFFING STARTED ON 7/86	1978
P		BIO-RESPONSE INC. TPA;MASS CELL CULTURE;	1972
P	QGJ	BIOGEN HEPATITIS B CORE ANTIGEN	1979
P	KV	BIOTECHNOLOGY GENERAL CORP. SOD, BGH, HGH	1980
P	S	BIO THERAPEUTICS, INC. SPECIALTY BIOLOGICAL RESPONSE MODIFIERS	1984
P	X	BIO THERAPY SYSTEMS, INC. MABS FOR CANCER THERAPY	1984
P	AKQ	CALIFORNIA BIOTECHNOLOGY INC. QUESTIONNAIRE STATES ZERO PRODUCTS	1981
P	JG	CENTOCOR DIAGNOSTIC BLOOD TESTS FOR CANCER & HEPB	1979
P	BK0A	CETUS CORPORATION INTERFERON; INTERLEUKIN-2; MAB; ANTI-NEOPL	1971
P	QK	CHIRON CORPORATION DIAGN FOR AIDS; DNA PROBE DIAGN; WOUND HEA	1981
P	X	CISTRON BIOTECHNOLOGY, INC. IL-1, IL-2	1984
P	K	COOPER DEVELOPMENT CO. ALPHA1 ANTITRYPSIN, DRUGS, MABS, ETC	1980
P	X	DAMON BIOTECH INC. MABS, DRUG DELIV PRODS, CELL ENCAPSUL.SYS	1978
P	WH	DNAX RESEARCH SUB OF SP; NO PRODUCTION AT ALL	1980
P	V	ENZON SOD FOR HUMAN AND VET USE	1965
P		ENZON, INC. HUMAN THERAPEUTICS; ENZYMES	1981
P	P	EXOVIR, INC. TOPICAL FOR HSV-II	1981
P	JAQX	GENENTECH INSULIN, HGH, TPA, HSA, IF, ENZYMES	1976
P		GENETICS INSTITUTE, INC. GM-CSF; EPO; TPA; GENE SPLICE PRODS	1981
P	KJGE	GENZYME CORP. BIOLOGICALS FOR HUMAN HEALTH CARE; DIAGN	1981
P	H	HANA BIOLOGICS, INC. CELL IMPLANTS TO TREAT DISEASE	1979
P		HOUSTON BIOTECH OPHTHAMOLOGY AND NEUROLOGY PRODUCTS	1984
P		IDEC, INC.	
P	AG	IMMUNEX CORP. IL-2; GM-CSF; IL-1; IL-1BETA; LYMPHOKINES	1981
P	AGKH	IMMUNO MODULATORS LABS. INC INTERFERONS; AIDS TH; COSMETICS; HCG; ETC.	1981

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BIOTECHNOLOGY COMPANIES IN THERAPEUTICS (P)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
P	SGL	IMMUNOMEDICS, INC. AUTOIMM DIS ASSAY;ALLERGY PRODS;TUMOR MK	1983
P	J	INGENE, INC. BONE & CARTL HEAL;CA THER;SWEETENERS	1980
P	KA	INTEGRATED GENETICS, INC. DX DNA PROBES-SALMONELLA, GENETIC DIS	1981
P	GHB	INTERFERON SCIENCES, INC. INTERFERON	1981
P	KQX	INTERLEUKIN-2 LYMPHOKINES;AIDS VACCINE;INTERLEUKIN 1,2	1983
P		INVITRON CORP. CONTRACT MANUF OF CELL PRODS-HUMAN TU,DX	1984
P	P	KIRIN-AMGEN R & D ON ERYTHROPOIETIN	1984
P	JIBE	LUCKY BIOTECH CORP. IFN, HEPATITIS-B DX,PORCINE GH	1984
P	K	NEORX CORP. MELANOMA IMAGING AGENT-TECHNETINUM	1984
P	EFKO	NORTH COAST BIOTECHNOLOGY INC ENZYMES FOR PHARMACEUTICAL MANUFACTURING	1986
P	K	PHARMATEC, INC DRUG DEL'Y OF SYNTHETICS THRU BB BARRIER	1982
P	K	QUIDEL DX ASSAYS-PREG,FERT,STREP-A,ALLERY,INFEC	1981
P	AGKQ	RIBI IMMUNOCHEM RESEARCH, INC. VET-ANTI-TUMOR PROD;VET DX; VET VACCINES	1981
P	JG	SCRIPPS LABORATORIES BULK HUMAN PROTEINS;HORMONES;ENZYMES	1980
P	KX	SERONO LABS DRUGS AND DXS IN FERTIL,GRWTH,IMMUN,VIRO	1971
P	VA	SYNGENE PRODUCTS PRODUCTS FOR ANIMALS AND HUMAN HEALTH	1980
P	KG	T-CELL SCIENCES 6 MABS; 1 CELLFREE SANDWICH ASSAY KIT	1983
P	KG	TRITON BIOSCIENCES, INC. REAGENTS FOR CA & HISTOPATH RES;DX PRODS	1983
P	AJ	UNIGENE LABORATORIES, INC. NONE RESEARCH ON PEPTIDE HORMONES, ENZYM	1980
P		VIRAGEN INTERFERONS, PEPTIDES, ETC	1980
P	X	XOMA CORP. MAB BASED ANTICANCER THERAPEUTICS	1981
P	W	ZYMOGENETICS, INC. R&D-YEAST,CELLS,FUNGI,HUMAN SERA PROTEIN	1981
Q	HP	IMMUNOMED IMMUNOTHERAPEUTICS	1979
Q	XPX	PRAXIS BIOLOGICS VACCINES,TEST KITS,THERAPEUTICS	1983
S	PDK	CYGNUS RESEARCH CORP. DRUG DELIV'Y SYST;CONTRACTS TO PHARM COS	1985

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BIOTECHNOLOGY COMPANIES IN THERAPEUTICS (P)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
T	PMHC	NEUSHUL MARICULTURE	1978
		ANIT-VIRAL;ENZYMES;MOLLUSCAN SEED & CULT	
T	JP	OCEAN GENETICS	1981
		SPEC CHEMS & PHARMACEUT OF MARINE ALGAE	
T	P	SEAPHARM, INC.	1983
		MARINE PHARMACEUTICAL PRODS; TISSUE CULT	
V	KP	CODON	1980
		VET VACCINES, HUMAN DIAGNOST,	
W	PG	CREATIVE BIOMOLECULES	1981
		PEPTIDES, CONTRACT R AND D, TPA, EGF, &C	
W	P	IMMUNOGEN, INC.	1981
		DEV & MRKT CONJUGATED ABS FOR TU & DX	
W	XP	LIFE SCIENCES	1962
		APPL RES.ON VIRUSES, ANIMAL STRAINS,IFNS	
W	PVQ	SYNERGEN, INC.	1980
		RESEARCH FOR HUM AND ANIMAL PHARMACEUTS	
X	P	IMMUNETECH PHARMACEUTICALS	1981
		IMMUN ACTIVE PEPTIDES AS THERAPEUTICS	

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BIOTECHNOLOGY COMPANIES IN VACCINES (Q)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
A	GHQ	IMMUCELL CORPORATION 2 HUMAN DX; REAGENTS; 3 ANIMAL DX; 1 VACCIN	1982
A	JQ	SYNTRO CORP. ANIMAL VACCINES & DX; ANIMAL HEALTH PRODS	1981
F	DPJQ	BIOTECHNOLOGY DEVELOPMENT CORP EQUIPMENT, CONSULTING, REAGENTS	1982
K	QP	CAMBRIDGE BIOSCIENCE CORP. DX KITS FOR AIDS, ADENOVIRUS, ROTAVIRUS	1981
K	AQ	GENETIC DIAGNOSTICS CORP. DIAGNOSTIC TEST KITS	1981
K	PGQ	MUREX CORP. MAB REAGENTS & ANTIBODY KITS	1984
K	QPS	SYNBIOTICS CORP. VET DX; HUMAN DX; VACCINES;	1982
P	QK	ALPHA I BIOMEDICALS PEPTIDES TO PREV, DIAG & TREAT IMMUNEDEFIC	1982
P	QGJ	BIOGEN HEPATITIS B CORE ANTIGEN	1979
P	AKQ	CALIFORNIA BIOTECHNOLOGY INC. QUESTIONNAIRE STATES ZERO PRODUCTS	1981
P	QK	CHIRON CORPORATION DIAGN FOR AIDS; DNA PROBE DIAGN; WOUND HEA	1981
P	JAQX	GENENTECH INSULIN, HGH, TPA, HSA, IF, ENZYMES	1976
P	KQX	INTERLEUKIN-2 LYMPHOKINES; AIDS VACCINE; INTERLEUKIN 1, 2	1983
P	AGKQ	RIBI IMMUNOCHEM RESEARCH, INC. VET-ANTI-TUMOR PROD; VET DX; VET VACCINES	1981
Q	HP	IMMUNOMED IMMUNOTHERAPEUTICS	1979
Q	XPK	PRAXIS BIOLOGICS VACCINES, TEST KITS, THERAPEUTICS	1983
V	Q	ADVANCED GENETICS RES. INST. VETERINARY VACCINES	1980
V	Q	AMBICO, INC. VET VACCINES;	1974
V	QK	APPLIED BIOTECHNOLOGY VET VACCINES; HUMAN VACCINES & DX	1984
V	QK	BIOLOGICS CORP PSEUDORABIES VACCINE	1966
W	HKQ	LEE BIOMOLECULAR RESEARCH LABS INTERFERONS; ANTI-INTERFERON SERA;	1980
W	PVQ	SYNERGEN, INC. RESEARCH FOR HUM AND ANIMAL PHARMACEUTS	1980

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BIOTECHNOLOGY COMPANIES IN WASTER DISPOSAL/TREATMENT (R)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
B	AR	BIO HUMA NETICS	1984
		SOIL CONDITIONERS;FEED SUPPLMTS;WASTE TH	
H	OCLR	MYCOSEARCH, INC.	1979
		CULTURES OF RARE & NEW FUNGI;LIVE CULTUR	
J	SRD	BIOSCIENCE MANAGEMENT INC.	1984
		BACTERIAL CULTURES;INNOCULANTS;INSTRUMEN	
J	RPO	MICROBIO RESOURCES	1981
		FOOD ADDITIVES & COLORANTS;SPECIAL CHEMS	
R	M	ADVANCED MINERAL TECHNOLOGIES	1982
		WASTE TREAT & METAL RECOVER	
R		BIOSYSTEMS, INC.	1976
		GENERAL R AND D MICROBIAL	
R	LC	CYTOX CORPORATION	1975
		WASTE, AG, POLLUTION, ENERGY	
S	IDFR	BIOSPHERICS	1967
		WASTEWATER PROCESS & MONITORS &PILOT PLT	
Y	R	BIOCONTROL SYSTEMS	1985
		TESTS FOR FOOD WATER ETC, BIOSENSORS	

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BIOTECHNOLOGY COMPANIES IN UNSPECIFIED AREAS OF BIOTECHNOLOGY (S)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
A	BVS	UNIVERSITY GENETICS CO. LICENSES;50 CLON OR CULT PLANT; CELL&EMB	1981
B	S	EMTECH RESEARCH BIOTECH R&D FOR COSMETICS AND AGRICULTUR	1983
B	HSJM	NPI POTATO & FLOWER SEEDS;SOIL INNOCUL;SEEDS	1973
E	S	A/G TECHNOLOGY CORP. GAS SEPARATION;ULTRA & MICRO FILTRATION	1981
E	KS	BIOPROBE INTERNATIONAL, INC. SPECIALIZED GELS; SEPARATION DEVISE, ETC	1983
F	SDEH	QUEUE SYSTEMS INC CRYO PRESERVATION;CELL CULTURE;ENVIR SEP	1980
G	EHS	ADVANCED BIOTECHNOLOGIES MEDIA, SERA, GROWTH FACTORS	1982
G	S	EPITOPE, INC. RED CELL & HLA MCS; VIRAL DETEC'N KITS	1979
J	SRD	BIOSCIENCE MANAGEMENT INC. BACTERIAL CULTURES;INNOCULANTS;INSTRUMEN	1984
K	QPS	SYNBIOTICS CORP. VET DX;HUMAN DX; VACCINES;	1982
P	S	BIOTHERAPEUTICS, INC. SPECIALTY BIOLOGICAL RESPONSE MODIFIERS	1984
P	SGL	IMMUNOMEDICS, INC. AUTOIMM DIS ASSAY;ALLERGY PRODS;TUMOR MK	1983
S		APPLIED MICROBIOLOGY HEALTH CARE	1983
S	GH	BERKELEY ANTIBODY DEVELOP CUSTON ANTIBODIES MAB & POLYCLON	1983
S	KA	BETHYL LABS INC. ANTISERA & CUSTOM ANTISERA SERVICE	1977
S	HJ	BIOPOLYMERS, INC. CELL & TISSUE ADHESIVE; OPHTHAL ADHESIVE	1984
S	IDFR	BIOSPHERICS WASTEWATER PROCESS & MONITORS &PILOT PLT	1967
S	H	COLLAGEN CORPORATION MEDICAL DEVICES;COLLAGEN IMPLANT;TISS CU	1975
S	PDK	CYGNUS RESEARCH CORP. DRUG DELIV'Y SYST;CONTRACTS TO PHARM COS	1985
S	KJ	E-Y LABORATORIES, INC ANTISERA;CARB RECOGN FACTR;REAGENT;DIAGN	1978
S	F	GLEN MILLS, INC. OEM;CELL LYSING EQUIP; GLASS BEADS.	1980
S	JI	INFERGE NE COMPANY BAKING & BREWING STRAINS;GLUOAMALYSE STR	1983
S	F	INTELLI-GENETICS GENETIC ENGIN SOFTWARE;STRATEGENE	1980
S	EGK	INTER-CELL TECHNOLOGIES, INC. BIOLOGICALS;IMMUN'REAGENTS;LYMPHOKINES	1982
S		INTRA GENE INTERNATIONAL INC. TECHNOLOGY EXHCANGE;LICENSING	1981

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BIOTECHNOLOGY COMPANIES IN UNSPECIFIED AREAS OF BIOTECHNOLOGY (S)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
S		NATIONAL GENO SCIENCES UNKNOWN	1980
S	BAM	RICERCA, INC FERMENTATION AND RESEARCH	1986

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BIOTECHNOLOGY COMPANIES IN MARINE BIOTECHNOLOGY (T)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
T		MARICULTURA, INC. ALGAL PRODS. COSMET;FOOD;CROP STIM;PHARM	1986
T	PMHC	NEUSHUL MARICULTURE ANIT-VIRAL;ENZYMES;MOLLUSCAN SEED & CULT	1978
T	JP	OCEAN GENETICS SPEC CHEMS & PHARMACEUT OF MARINE ALGAE	1981
T	BO	R & A PLANT/SOIL INC. ALGAL SOIL CONDITIONERS, FERTILIZERS,ETC	1978
T	P	SEAPHARM, INC. MARINE PHARMACEUTICAL PRODS; TISSUE CULT	1983

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BIOTECHNOLOGY COMPANIES IN MARINE BIOTECHNOLOGY (T)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
T		MARICULTURA, INC. ALGAL PRODS. COSMET;FOOD;CROP STIM;PHARM	1986
T	PMHC	NEUSHUL MARICULTURE ANIT-VIRAL;ENZYMES;MOLLUSCAN SEED & CULT	1978
T	JP	OCEAN GENETICS SPEC CHEMS & PHARMACEUT OF MARINE ALGAE	1981
T	BO	R & A PLANT/SOIL INC. ALGAL SOIL CONDITIONERS, FERTILIZERS,ETC	1978
T	P	SEAPHARM, INC. MARINE PHARMACEUTICAL PRODS; TISSUE CULT	1983

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BIOTECHNOLOGY COMPANIES IN CONSULTING (U)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
U	Y	TOXICON TOXICOLOGY SERVICE;REGISTRATION SUPPORT	1978

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BIOTECHNOLOGY COMPANIES IN VETERINARY WORK (V)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
A	MV	INTERN'TL MINERAL & CHEMICAL ANIMAL GROWTH, HEALTH AND, NUTRITION	1970
A	BVS	UNIVERSITY GENETICS CO. LICENSES;50 CLON OR CULT PLANT; CELL&EMB	1981
B	AVFY	NEOGEN CORP. FOOD, PLANT HEALTH, ANIMAL HEALTH	1981
E	GVA	PHARMACIA BIOTECHNOLOGY GROUP CHROMA SEPARATION CHEMICALS & INSTRUMENT	1960
G	KV	CLINICAL SCIENCES, INC. BIOCHEMICALS FOR DIAGNOS AND VET USES	1971
J	VBP	LIPOSOME TECHNOLOGY LIPOSOMES FOR PHARM, VET, AG, ETC	1981
P	KV	BIOTECHNOLOGY GENERAL CORP. SOD, BGH, HGH	1980
P	V	ENZON SOD FOR HUMAN AND VET USE	1965
P	VA	SYNGENE PRODUCTS PRODUCTS FOR ANIMALS AND HUMAN HEALTH	1980
V	Q	ADVANCED GENETICS RES. INST. VETERINARY VACCINES	1980
V	J	ALLELIC BIOSYSTEMS VET TOX TESTS, PROBES, OLIGOS, REAGENTS	1984
V	Q	AMBICO, INC. VET VACCINES;	1974
V	X	AMTRON ANIMAL DISEASE PREVENTATIVES-PROPIETARY	1981
V	K	ANTIBODIES, INC. VET DX	1961
V	QK	APPLIED BIOTECHNOLOGY VET VACCINES;HUMAN VACCINES & DX	1984
V	QK	BIOLOGICS CORP PSEUDORABIES VACCINE	1966
V	A	BIOMED RESEARCH LABS INC FISH BIOLOGICS, VET	1974
V	KP	CODON VET VACCINES, HUMAN DIAGNOST,	1980
V		GENETIC ENGINEERING, INC. ANIMAL SEX SELECTION, BULL SEMEN LABS	1980
W	PVQ	SYNERGEN, INC. RESEARCH FOR HUM AND ANIMAL PHARMACEUTS	1980
Y	WV	MICROBIOLOGICAL ASSOCIATES TOX TESTING FOR GOVT, SOME PROD DEVEL	1947

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BIOTECHNOLOGY COMPANIES IN RESEARCH (W)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
G	XWK	INTER-AMERICAN RESEARCH ASC. PURIFIED ANTIGENS, ANTISERA, BLOOD PRODS	1979
K	WF	BIOSTAR MEDICAL PRODUCTS, INC. DIAGNOSTICS & TEST KITS FOR AUTOIMM.DIS	1983
P	WH	DNAX RESEARCH SUB OF SP; NO PRODUCTION AT ALL	1980
P	W	ZYMOGENETICS, INC. R&D-YEAST, CELLS, FUNGI, HUMAN SERA PROTEIN	1981
W		AGOURON INSTITUTE BASIC RESEARCH IN BIOTECH, NON PROFIT	1979
W		BIOMATRIX, INC. MATERIAL FOR ARTIF ORGANS; COSMET; OPHTHAL	1981
W	KG	BIONETICS RESEARCH CLINICAL DIAGNOSTICS; RESEARCH REAGENTS	1986
W	PG	CREATIVE BIOMOLECULES PEPTIDES, CONTRACT R AND D, TPA, EGF, & C	1981
W		IGEN CONT. RESEARCH; MABS FOR HUMAN PATHOGENS	1982
W	P	IMMUNOGEN, INC. DEV & MRKT CONJUGATED ABS FOR TU & DX	1981
W		IMRE CORP R & D FOR BLOOD PURIFIERS AND PROTEIN A	1981
W	HKQ	LEE BIOMOLECULAR RESEARCH LABS INTERFERONS; ANTI-INTERFERON SERA;	1980
W	XP	LIFE SCIENCES APPL RES.ON VIRUSES, ANIMAL STRAINS, IFNS	1962
W	E	MELOY LABORATORIES, INC. SERVICES; REAGENTS; RESEARCH & DEVELOPMEN	1970
W		SIBIA SALK INSTITUTE'S RESEARCH FIRM	1981
W	PVQ	SYNERGEN, INC. RESEARCH FOR HUM AND ANIMAL PHARMACEUTS	1980
W	KJ	XENOGEN RDNA RESEARCH FOR DIAGNOS AND CHEMICALS	1981
Y	WV	MICROBIOLOGICAL ASSOCIATES TOX TESTING FOR GOVT, SOME PROD DEVEL	1947

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BIOTECHNOLOGY COMPANIES IN IMMUNOLOGICAL PRODUCTS (X)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
G	PX	ALFACELL CORPORATION TUMOR TOXINS, REAGENTS, SERA	1981
G	X	ATLANTIC ANTIBODIES IMMUNODX TEST KITS; REAGENTS	1973
G	X	BIOTEST DIAGNOSTICS CORP REAGENTS AND MAB MARKERS	1946
G	X	CLONTECH LABORATORIES, INC. CDNA LIBRARIES, REAGENTS, ETC	1984
G	FX	HAZLETON BIOTECHNOLOGIES GRP LAB REAGENTS AND EQUIPMENT, MEDIA, MABS	1981
G	XWK	INTER-AMERICAN RESEARCH ASC. PURIFIED ANTIGENS, ANTISERA, BLOOD PRODS	1979
G	JX	INTERN'TL ENZYMES, INC. SERUM FREE MEDIA SUPPL;ENZYMES;ANTISERA	1974
G	JX	PEL-FREEZ BIOLOGICALS, INC. VARIOUS SPECIALTY REAGENTS, MAB SERA,ETC	1911
G	KX	SUMMA MEDICAL CORP. HISTOCHEMICAL MARKERS AND KITS, CA DX	1978
J	X	SOUTHERN BIOTECH ASSOCIATES PRODUCE COLLAGEN AND ANTIBODIES TO IT	1982
K	PX	CYTOGEN CORP THERAPEUTIC MABS AND DIAGNOST.	1980
K	X	NUCLEAR & GENETIC TECHNOLOGY RADIOLABELED MABS FOR CANCER DX	1980
K	PX	ONCOGENE SCIENCE, INC ONCOGENE PROBS FOR DX AND THERAP, MABS	1983
K	XG	RESEARCH&DIAGNOSTIC ANTIBODIES DIAGNOSTIC KITS, MAB REAGENTS	1985
K	JX	UNITED BIOMEDICAL INC DIAGNOSTICS, MABS, SPECIALTY PROTEINS	1984
O	JPX	BIOPURE CUSTOM FERM. OF THERAP, MAB,CHEMICALS	1984
P	X	BIO THERAPY SYSTEMS, INC. MABS FOR CANCER THERAPY	1984
P	X	CISTRON BIOTECHNOLOGY, INC. IL-1, 1L-2	1984
P	X	DAMON BIOTECH INC. MABS, DRUG DELIV PRODS,CELL ENCAPSUL.SYS	1978
P	JAQX	GENENTECH INSULIN, HGH, TPA, HSA, IF, ENZYMES	1976
P	KQX	INTERLEUKIN-2 LYMPHOKINES;AIDS VACCINE;INTERLEUKIN 1,2	1983
P	KX	SERONO LABS DRUGS AND DXS IN FERTIL,GRWTH,IMMUN,VIRO	1971
P	X	XOMA CORP. MAB BASED ANTICANCER THERAPEUTICS	1981
Q	XPX	PRAXIS BIOLOGICS VACCINES,TEST KITS,THERAPEUTICS	1983
V	X	AMTRON ANIMAL DISEASE PREVENTATIVES-PROPIETARY	1981

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BIOTECHNOLOGY COMPANIES IN IMMUNOLOGICAL PRODUCTS (X)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
W	XP	LIFE SCIENCES	1962
		APPL RES.ON VIRUSES, ANIMAL STRAINS,IFNS	
X	G	BIOPRODUCTS FOR SCIENCE, INC.	1985
		ANTIBODIES;ANTIGEN MARKERS;REAGENTS	
X	HF	CHARLES RIVER BIOTECH.SERVICES	1983
		MABS, CULTURE SYSTEMS	
X	K	DAKO CORP	1979
		POLY AND MONO AB'S, CLIN TEST KITS,PROTS	
X		HYBRITECH, INC.	1978
		IMMUNOASSAYS;R&D MABS;	
X	P	IMMUNETECH PHARMACEUTICALS	1981
		IMMUN ACTIVE PEPTIDES AS THERAPEUTICS	
X		IMREG, INC.	1981
		IMMUNOREGULATORS	
X		INTEK DIAGNOSTICS, INC.	1983
		T CELL CLONES, ANTIGENS, FLOW CYTOMETRY	
X		MONOCLONAL PRODUCTION INT'L	1983
		MABS FORMED IN SHEEP/COW UTERUS	
X	G	SERAGEN, INC	1979
		R & D IMMUNOLOGICS,REAGENTS,ANTISERA,ETC	
X		TRANSFORMATION RESEARCH INC.	1981
		ANTIBODIES	

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BIOTECHNOLOGY COMPANIES IN TOXIN TESTING (Y)

PRIMARY CODE	SECONDARY CODE	COMPANY NAME PRODUCT AREAS	YEAR OF FOUNDING
B	AVFY	NEOGEN CORP. FOOD, PLANT HEALTH, ANIMAL HEALTH	1981
K	YJ	PROTATEK INTERNATIONAL, INC. VIRUS, TEST KITS, SPECIALIZED MICROBES	1985
U	Y	TOXICON TOXICOLOGY SERVICE; REGISTRATION SUPPORT	1978
Y	R	BIOCONTROL SYSTEMS TESTS FOR FOOD WATER ETC, BIOSENSORS	1985
Y		ENVIRONMENTAL DIAGNOSTICS, INC ENVIRON AND TOXIN TESTING	1983
Y	WV	MICROBIOLOGICAL ASSOCIATES TOX TESTING FOR GOVT, SOME PROD DEVEL	1947

Section VIII Personnel

VIII-A lists the small companies with 1-20 employees

VIII-B lists the medium sized companies with 21-100 employees

VIII-C lists the large companies with 101-1000 employees

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BIOTECHNOLOGY COMPANIES SORTED BY SIZE
SMALL COMPANIES (1-20 EMPLOYEES)
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	COMPANY NAME	TYPE	PERSONNEL
1	A/G TECHNOLOGY CORP.	S	8
2	ADVANCED BIOTECHNOLOGIES	S	17
3	ADVANCED MINERAL TECHNOLOGIES	S	14
4	AGDIA, INC.	S	8
5	AGOURON INSTITUTE	S	
6	AGRI-DIAGNOSTICS ASSOCIATES	SJ	22
7	ALLELIC BIOSYSTEMS	S	
8	ALPHA I BIOMEDICALS	S	9
9	AMERICAN BIOGENETICS CORP	S	10
10	AMERICAN BIOTECHNOLOGY CO	S	5
11	AMERICAN DIAGNOSTICA, INC.	S	9
12	AMERICAN QUALEX INTL, INC	S	10
13	AMTRON	S	16
14	AN-CON GENETICS	SU	3
15	ANTIVIRALS, INC	S	6
16	APPLIED GENETICS LABS. INC.	S	3
17	APPLIED MICROBIOLOGY	S	20
18	APPLIED PROTEIN TECHNOL. INC	S	5
19	AUTOMEDIX SCIENCES, INC	S	6
20	BENTECH LABORATORIES	S	7
21	BERKELEY ANTIBODY	S	20
22	BETHYL LABS INC.	S	8
23	BINAX, INC	S	12
24	BIO HUMA NETICS	S	15
25	BIOCHEM TECHNOLOGY INC	S	10
26	BIOCLINICAL SYSTEMS, INC	SU	
27	BIOCONSEP, INC.	S	6
28	BIOCONTROL SYSTEMS	S	14
29	BIOLOGICAL ENERGY CORP.	S	13
30	BIOMATERIALS INTERNATIONAL, INC	S	15
31	BIOMED RESEARCH LABS INC	S	
32	BIOMEDICAL TECHNOLOGIES	S	7
33	BIONETICS RESEARCH	S	
34	BIONIQUE LABS INC.	S	9
35	BIOPOLYMERS, INC.	S	15
36	BIOPROBE INTERNATIONAL, INC.	S	15
37	BIOPRODUCTS FOR SCIENCE, INC.	S	19
38	BIOPURE	S	16
39	BIOSCIENCE MANAGEMENT INC.	S	8
40	BIOSYSTEMS, INC.	S	
41	BIOTEST DIAGNOSTICS CORP	SU	
42	BIO THERAPY SYSTEMS, INC.	S	8
43	BIO THERM	S	
44	BRAIN RESEARCH INC.	S	
45	BREIT LABORATORIES	S	15
46	CALIFORNIA INTEGRATED DIAGNOST	SU	17

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SMALL COMPANIES (1-20 EMPLOYEES)
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	COMPANY NAME	TYPE	PERSONNEL
47	CALZYME LABORATORIES, INC.	S	10
48	CHEMGENES	S	8
49	CHEMICON INTERNATIONAL, INC	S	8
50	CHIMERIX	S	9
51	CLONTECH LABORATORIES, INC.	S	18
52	CONSOLIDATED BIOTECHNOLOGY, INC	S	
53	COVALENT TECHNOLOGY CORP.	S	16
54	CYGNUS RESEARCH CORP.	S	15
55	CYTOTECH, INC	S	20
56	E-Y LABORATORIES, INC	S	20
57	EMBEX, INC.	S	17
58	EXOVIR, INC.	S	5
59	GAMETRICS, LTD.	S	
60	GENETIC DIAGNOSTICS CORP.	S	17
61	GENTRONIX, INC.	S	6
62	GLEN MILLS, INC.	S	11
63	GRANADA GENETICS CORP.	SU	3
64	HAWAII BIOTECHNOLOGY GROUP, INC	S	10
65	IDETEK, INC.	S	14
66	IMMUCELL CORPORATION	S	17
67	IMMUNOGEN, INC.	S	11
68	IMMUNOMED	S	17
69	IMMUNOTECH CORP.	S	15
70	INTEGRATED CHEMICAL SENSORS	S	8
71	INTER-CELL TECHNOLOGIES, INC.	S	9
72	INTERLEUKIN-2	S	
73	INTERN'TL ENZYMES, INC.	S	4
74	INTRA GENE INTERNATIONAL INC.	S	12
75	JACKSON IMMUNOREASEARCH LAB	S	16
76	LEE BIOMOLECULAR RESEARCH LABS	S	16
77	LIFE SCIENCES	S	20
78	LIFECORE, INC	S	20
79	LUCKY BIOTECH CORP.	SU	4
80	MARCOR DEVELOPMENT CORP.	S	6
81	MARICULTURA, INC.	S	7
82	MOLECULAR GENETIC RESOURCES	S	5
83	MONOCLONAL PRODUCTION INT'L	S	4
84	MONOCLONETICS INTERNAT'L, INC.	S	5
85	MULTIPLE PEPTIDE SYSTEMS INC	S	2
86	MYCOSEARCH, INC.	S	4
87	NATIONAL GENO SCIENCES	S	4
88	NEUSHUL MARICULTURE	S	6
89	NORTH COAST BIOTECHNOLOGY INC	S	2
90	NUCLEAR & GENETIC TECHNOLOGY	S	15
91	NYGENE CORP.	S	18
92	O.C.S. LABS	S	12

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SMALL COMPANIES (1-20 EMPLOYEES)
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	COMPANY NAME	TYPE	PERSONNEL
93	OCEAN GENETICS	S	8
94	OMNI BIOCHEM, INC.	S	5
95	PETROGEN INC.	S	
96	PHYTOGEN	S	20
97	PROTATEK INTERNATIONAL, INC.	S	
98	R & A PLANT/SOIL INC.	S	6
99	RECOMTEX CORP.	S	12
100	RESEARCH&DIAGNOSTIC ANTIBODIES	S	
101	SOUTHERN BIOTECH ASSOCIATES	S	9
102	SUNGENE TECHNOLOGIES CORP	S	28
103	SYNGENE PRODUCTS	SU	20
104	TECHNICLONE INTERNATIONAL, INC	S	9
105	TECHNOMETRICS, INC.	S	
106	TRANSFORMATION RESEARCH INC.	S	4
107	UNITED BIOMEDICAL INC	S	10
108	UNIVERSITY MICRO REFERENCE LAB	S	
109	VIRAGEN	S	15
110	WESTBRIDGE RESEARCH GROUP	S	15
111	XENOGEN	S	
112	ZYMED LABORATORIES, INC.	S	20

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BIOTECHNOLOGY COMPANIES SORTED BY SIZE
MEDIUM COMPANIES (21-100 EMPLOYEES)
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	COMPANY NAME	TYPE	PERSONNEL
1	ADVANCED GENETIC SCIENCES	M	93
2	ADVANCED GENETICS RES. INST.	MU	25
3	ADVANCED MAGNETICS, INC.	M	30
4	AGRACETUS	MJV	65
5	AGRIGENETICS CORPORATION	MU	
6	AGRITECH SYSTEMS, INC	M	70
7	AGROTEK	MU	
8	ALFACELL CORPORATION	M	22
9	AMBICO, INC.	M	25
10	AMERICAN BIOCLINICAL	M	24
11	AMERICAN BIONETICS, INC (ABN)	M	22
12	AMERICAN LABORATORIES, INC	M	26
13	ANGENICS	M	50
14	ANTIBODIES, INC.	M	35
15	APPLIED BIOTECHNOLOGY	M	
16	ATLANTIC ANTIBODIES	MU	60
17	BALL BIOTECH COMPANY	M	25
18	BEND RESEARCH, INCORPORATED	M	45
19	BIO TECHNIQUES LABS., INC.	M	35
20	BIO-RECOVERY, INC.	M	49
21	BIO-RESPONSE INC.	M	45
22	BIO-TECHNICAL RESOURCES, INC.	M	25
23	BIOASSAY SYSTEMS CORP.	MU	65
24	BIOGENEX LABORATORIES	M	30
25	BIOLOGICS CORP	MU	85
26	BIOMATRIX, INC.	M	
27	BIOSEARCH, INC.	MU	
28	BIOSTAR MEDICAL PRODUCTS, INC.	M	30
29	BIOTECHNOLOGY DEVELOPMENT CORP	M	35
30	BIOTECHNOLOGY GENERAL CORP.	M	78
31	BIOTICS RESEARCH CORPORATION	M	22
32	CALGENE, INC.	M	16
33	CAMBRIDGE BIOSCIENCE CORP.	M	55
34	CHARLES	M	
35	CHARLES RIVER BIOTECH.SERVICES	MU	
36	CHEMICAL DYNAMICS CORP.	M	
37	CISTRON BIOTECHNOLOGY, INC.	M	30
38	CLINICAL BIOTECHNOLOGIES, INC.	M	22
39	CLINICAL SCIENCES, INC.	M	50
40	CODON	M	64
41	CORNING BIOMEDICAL RESEARCH	MU	
42	CREATIVE BIOMOLECULES	M	40
43	CROP GENETICS INTERNATIONAL, NV	M	49
44	CYANOTECH CORPORATION	M	23
45	CYTOGEN CORP	M	60
46	CYTOX CORPORATION	M	22

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 MEDIUM COMPANIES (21-100 EMPLOYEES)
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	COMPANY NAME	TYPE	PERSONNEL
47	DELTOWN CHEMURGIC CORP.	M	90
48	DIAGNON CORP.	M	70
49	DIAGNOSTIC TECHNOLOGY, INC.	M	60
50	DIAMEDIX, INC.	M	30
51	DNA PLANT TECHNOLOGY CORP.	M	80
52	DNAX	MU	81
53	EMTECH RESEARCH	M	30
54	ENGENICS, INC.	M	30
55	ENVIRONMENTAL DIAGNOSTICS, INC	M	55
56	ENZON	M	22
57	ENZON, INC.	M	31
58	ENZYME CENTER INC., THE	M	30
59	ENZYME TECHNOLOGY CORP.	MU	26
60	EPITOPE, INC.	M	21
61	FERMENTEC CORP	M	30
62	GEN-PROBE, INC.	M	11
63	GENENCOR, INC.	MJV	10
64	GENESIS LABS, INC.	M	29
65	GENETIC ENGINEERING, INC.	M	23
66	GENEX INC.	M	
67	HANA BIOLOGICS, INC.	M	82
68	HOUSTON BIOTECH	M	
69	HP GENENCHEM	MJ	
70	HYGEIA SCIENCES	M	70
71	IGENE BIOTECHNOLOGY INC.	M	30
72	IMMUNETECH PHARMACEUTICALS	M	45
73	IMMUNO MODULATORS LABS. INC	M	25
74	IMMUNOMEDICS, INC.	M	55
75	IMRE CORP	M	23
76	IMREG, INC.	M	31
77	INCELL CORPORATION	M	23
78	INFERGENE COMPANY	M	25
79	INGENE, INC.	M	65
80	INTEK DIAGNOSTICS, INC.	M	33
81	INTELLI-GENETICS	M	49
82	INTER-AMERICAN RESEARCH ASC.	M	44
83	INTERFERON SCIENCES, INC.	M	70
84	INTERN'TL PLANT RESEARCH INST.	M	50
85	KARYON TECHNOLOGY, LTD.	M	25
86	KIRIN-AMGEN	JVM	
87	LIFECODES CORP.	M	53
88	LIPOSOME COMPANY INC.	M	67
89	LIPOSOME TECHNOLOGY	M	65
90	MICROBIO RESOURCES	M	39
91	MICROGENICS	M	70
92	MOLECULAR BIOSYSTEMS, INC.	M	27

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 MEDIUM COMPANIES (21-100 EMPLOYEES)
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	COMPANY NAME	TYPE	PERSONNEL
93	MOLECULAR DIAGNOSTICS, INC.	M	30
94	MYCOGEN	M	50
95	NEOGEN CORP.	M	
96	NEORX CORP.	M	10
97	NMS PHARMACEUTICALS	M	30
98	ONCOGENE SCIENCE, INC	M	50
99	PEL-FREEZ BIOLOGICALS, INC.	M	
100	PENINSULA LABORATORIES, INC	M	
101	PETROFERM USA	M	68
102	PHARMATEC, INC	M	25
103	PLANT GENETICS, INC.	M	63
104	QUEUE SYSTEMS INC	M	85
105	REPLIGEN CORP.	M	
106	RIBI IMMUNOCHEM RESEARCH, INC.	M	35
107	SCRIPPS LABORATORIES	M	
108	SEAPHARM, INC.	M	50
109	SEPRACOR, INC.	M	40
110	SIBIA	M	65
111	STRATAGENE CLONING SYSTEMS	M	40
112	SUMMA MEDICAL CORP.	M	33
113	SYNBIOTICS CORP.	M	89
114	SYNTRO CORP.	M	84
115	T-CELL SCIENCES	M	49
116	TOXICON	M	35
117	UNIGENE LABORATORIES, INC.	M	30
118	UNIVERSITY GENETICS CO.	M	10
119	VECTOR LABORATORIES, INC.	M	
120	VERAX CORP.	M	80
121	ZYMOGENETICS, INC.	M	95

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BIOTECHNOLOGY COMPANIES SORTED BY SIZE
LARGE COMPANIES (101-1000 EMPLOYEES)
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	COMPANY NAME	TYPE	PERSONNEL
1	AMGEN	L	21
2	APPLIED BIOSYSTEMS	L	35
3	BEHRING DIAGNOSTICS	LU	
4	BIOGEN	L	36
5	BIOSPHERICS	L	25
6	BIOTECH RESEARCH LABS, INC	L	10
7	BIOTECHNICA INTERNATIONAL	L	14
8	BIOTHERAPEUTICS, INC.	L	12
9	CALIFORNIA BIOTECHNOLOGY INC.	L	15
10	CENTOCOR	L	24
11	CETUS CORPORATION	L	67
12	CHIRON CORPORATION	L	22
13	COLLABORATIVE RESEARCH INC.	L	16
14	COLLAGEN CORPORATION	L	22
15	COOPER DEVELOPMENT CO.	LU	
16	COORS BIOTECH PRODUCTS CO.	LU	18
17	DAMON BIOTECH INC.	L	12
18	DEKALB-PFIZER GENETICS	LJV	23
19	DIAGNOSTIC PRODUCTS, CORP.	L	27
20	ELECTRO-NUCLEONICS, INC.	L	72
21	ENDOTRONICS, INC.	L	15
22	ENZO BIOCHEM, INC.	L	11
23	FLOW LABORATORIES, INC.	LU	
24	GAMMA BIOLOGICALS, INC.	L	16
25	GENENTECH	L	95
26	GENETIC SYSTEMS CORP.	LU	40
27	GENETICS INSTITUTE, INC.	L	28
28	GENZYME CORP.	L	18
29	HAZLETON BIOTECHNOLOGIES GRP	LU	50
30	HYBRITECH, INC.	LU	
31	HYCLONE LABORATORIES	L	10
32	IMMUNEX CORP.	L	15
33	INTEGRATED GENETICS, INC.	L	20
34	INVITRON CORP.	L	20
35	KALLESTAD LABORATORIES	L	33
36	MELOY LABORATORIES, INC.	LU	24
37	MICROBIOLOGICAL ASSOCIATES	L	21
38	MOLECULAR GENETICS, INC	L	12
39	MONOCLONAL ANTIBODIES, INC.	L	13
40	MUREX CORP.	L	18
41	NPI	L	62
42	PROMEGA BIOTECH	L	
43	QUIDEL	L	32
44	RICERCA, INC	LU	16
45	SCOTT LABORATORIES	LU	37
46	SERAGEN, INC	L	25

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	COMPANY NAME	TYPE	PERSONNEL
47	SERONO LABS	L	90
48	SYNERGEN, INC.	L	10
49	SYVA CO	LU	10
50	THREE-M(3M) DIAGNOSTIC SYSTEMS	LU	13
51	TRITON BIOSCIENCES, INC.	LU	14
52	UNITED AGRISEEDS INC	L	19
53	UNITED STATES BIOCHEMICAL CORP	L	
54	VEGA BIOTECHNOLOGIES, INC.	L	
55	XOMA CORP.	L	12
56	ZOECON CORP. (SANDOZ CROP PRO)	LU	13

VIII-D is a listing of the companies in the top six company classifications, secondarily sorted by the company size.

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 SIZE BREAKDOWN FOR CLASS A, B, G, J, K, P

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CODE	COMPANY NAME	SIZE
A	GRANADA GENETICS CORP.	SU
A	EMBREX, INC.	S
A	IMMUCELL CORPORATION	S
A	BIO TECHNIQUES LABS., INC.	M
A	DIAGNON CORP.	M
A	SYNTRO CORP.	M
A	UNIVERSITY GENETICS CO.	M
A	MOLECULAR GENETICS, INC	L
A	INTERN'TL MINERAL & CHEMICAL	C
B	AGDIA, INC.	S
B	BENTECH LABORATORIES	S
B	BIO HUMA NETICS	S
B	HAWAII BIOTECHNOLOGY GROUP, INC	S
B	PHYTOGEN	S
B	SUNGENE TECHNOLOGIES CORP	S
B	AGRIGENETICS CORPORATION	MU
B	AGROTEK	MU
B	AGRACETUS	MJV
B	ADVANCED GENETIC SCIENCES	M
B	CALGENE, INC.	M
B	CROP GENETICS INTERNATIONAL, NV	M
B	DNA PLANT TECHNOLOGY CORP.	M
B	EMTECH RESEARCH	M
B	INTERN'TL PLANT RESEARCH INST.	M
B	MYCOGEN	M
B	NEOGEN CORP.	M
B	PLANT GENETICS, INC.	M
B	SEPRACOR, INC.	M
B	ZOECON CORP. (SANDOZ CROP PRO)	LU
B	DEKALB-PFIZER GENETICS	LJV
B	BIOTECHNICA INTERNATIONAL	L
B	NPI	L
B	UNITED AGRISEEDS INC	L
G	BIOTEST DIAGNOSTICS CORP	SU
G	ADVANCED BIOTECHNOLOGIES	S
G	AMERICAN QUALEX INTL, INC	S
G	CHEMGENES	S
G	CHEMICON INTERNATIONAL, INC	S
G	CLONTECH LABORATORIES, INC.	S
G	CONSOLIDATED BIOTECHNOLOGY, INC	S
G	INTERN'TL ENZYMES, INC.	S
G	JACKSON IMMUNOREASEARCH LAB	S
G	MOLECULAR GENETIC RESOURCES	S
G	MONOCLONETICS INTERNAT'L, INC.	S
G	UNIVERSITY MICRO REFERENCE LAB	S
G	ZYMED LABORATORIES, INC.	S
G	ATLANTIC ANTIBODIES	MU

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SIZE BREAKDOWN FOR CLASS A, B, G, J, K, P

CODE	COMPANY NAME	SIZE
G	BIOSEARCH, INC.	MU
G	ALFACELL CORPORATION	M
G	AMERICAN BIOCLINICAL	M
G	AMERICAN BIONETICS, INC (ABN)	M
G	CHEMICAL DYNAMICS CORP.	M
G	CLINICAL SCIENCES, INC.	M
G	EPITOPE, INC.	M
G	INTER-AMERICAN RESEARCH ASC.	M
G	MOLECULAR BIOSYSTEMS, INC.	M
G	PEL-FREEZ BIOLOGICALS, INC.	M
G	STRATAGENE CLONING SYSTEMS	M
G	SUMMA MEDICAL CORP.	M
G	VECTOR LABORATORIES, INC.	M
G	FLOW LABORATORIES, INC.	LU
G	HAZLETON BIOTECHNOLOGIES GRP	LU
G	SCOTT LABORATORIES	LU
G	COLLABORATIVE RESEARCH INC.	L
G	DIAGNOSTIC PRODUCTS, CORP.	L
G	PROMEGA BIOTECH	L
G	UNITED STATES BIOCHEMICAL CORP	L
J	BIOMEDICAL TECHNOLOGIES	S
J	BIOSCIENCE MANAGEMENT INC.	S
J	CALZYME LABORATORIES, INC.	S
J	LIFECORE, INC	S
J	MARCOR DEVELOPMENT CORP.	S
J	O.C.S. LABS	S
J	OMNI BIOCHEM, INC.	S
J	SOUTHERN BIOTECH ASSOCIATES	S
J	WESTBRIDGE RESEARCH GROUP	S
J	GENENCOR, INC.	MJV
J	DELTOWN CHEMURGIC CORP.	M
J	INCELL CORPORATION	M
J	LIPOSOME COMPANY INC.	M
J	LIPOSOME TECHNOLOGY	M
J	MICROBIO RESOURCES	M
J	PENINSULA LABORATORIES, INC	M
J	REPLIGEN CORP.	M
K	BIOCLINICAL SYSTEMS, INC	SU
K	CALIFORNIA INTEGRATED DIAGNOST	SU
K	AGRI-DIAGNOSTICS ASSOCIATES	SJ
K	AMERICAN DIAGNOSTICA, INC.	S
K	ANTIVIRALS, INC	S
K	APPLIED GENETICS LABS. INC.	S
K	BINAX, INC	S
K	BIOTHERM	S
K	BRAIN RESEARCH INC.	S
K	BREIT LABORATORIES	S

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SIZE BREAKDOWN FOR CLASS A, B, G, J, K, P

CODE	COMPANY NAME	SIZE
K	CHIMERIX	S
K	COVALENT TECHNOLOGY CORP.	S
K	CYTOTECH, INC	S
K	GAMETRICS, LTD.	S
K	GENETIC DIAGNOSTICS CORP.	S
K	IMMUNOTECH CORP.	S
K	NUCLEAR & GENETIC TECHNOLOGY	S
K	PROTATEK INTERNATIONAL, INC.	S
K	RECOMTEX CORP.	S
K	RESEARCH&DIAGNOSTIC ANTIBODIES	S
K	TECHNICLONE INTERNATIONAL, INC	S
K	UNITED BIOMEDICAL INC	S
K	ADVANCED MAGNETICS, INC.	M
K	AGRITECH SYSTEMS, INC	M
K	ANGENICS	M
K	BIOGENEX LABORATORIES	M
K	BIOSTAR MEDICAL PRODUCTS, INC.	M
K	CAMBRIDGE BIOSCIENCE CORP.	M
K	CHARLES	M
K	CYTOGEN CORP	M
K	DIAGNOSTIC TECHNOLOGY, INC.	M
K	DIAMEDIX, INC.	M
K	GEN-PROBE, INC.	M
K	GENESIS LABS, INC.	M
K	HYGEIA SCIENCES	M
K	LIFECODES CORP.	M
K	MICROGENICS	M
K	MOLECULAR DIAGNOSTICS, INC.	M
K	NMS PHARMACEUTICALS	M
K	ONCOGENE SCIENCE, INC	M
K	SYNBIOTICS CORP.	M
K	BEHRING DIAGNOSTICS	LU
K	GENETIC SYSTEMS CORP.	LU
K	SYVA CO	LU
K	THREE-M(3M) DIAGNOSTIC SYSTEMS	LU
K	BIOTECH RESEARCH LABS, INC	L
K	ELECTRO-NUCLEONICS, INC.	L
K	ENZO BIOCHEM, INC.	L
K	GAMMA BIOLOGICALS, INC.	L
K	KALLESTAD LABORATORIES	L
K	MONOCLONAL ANTIBODIES, INC.	L
K	MUREX CORP.	L
P	LUCKY BIOTECH CORP.	SU
P	SYNGENE PRODUCTS	SU
P	ALPHA I BIOMEDICALS	S
P	AMERICAN BIOTECHNOLOGY CO	S
P	AUTOMEDIX SCIENCES, INC	S

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SIZE BREAKDOWN FOR CLASS A, B, G, J, K, P

CODE	COMPANY NAME	SIZE
P	BIO THERAPY SYSTEMS, INC.	S
P	EXO VIR, INC.	S
P	INTERLEUKIN-2	S
P	NORTH COAST BIOTECHNOLOGY INC	S
P	VIRAGEN	S
P	DNAX	MU
P	KIRIN-AMGEN	MJV
P	AMERICAN LABORATORIES, INC	M
P	BIO-RESPONSE INC.	M
P	BIOTECHNOLOGY GENERAL CORP.	M
P	CISTRON BIOTECHNOLOGY, INC.	M
P	ENZON	M
P	ENZON, INC.	M
P	HANA BIOLOGICS, INC.	M
P	HOUSTON BIOTECH	M
P	IMMUNO MODULATORS LABS. INC	M
P	IMMUNOMEDICS, INC.	M
P	INGENE, INC.	M
P	INTERFERON SCIENCES, INC.	M
P	NEORX CORP.	M
P	PHARMATEC, INC	M
P	RIBI IMMUNOCHEM RESEARCH, INC.	M
P	SCRIPPS LABORATORIES	M
P	T-CELL SCIENCES	M
P	UNIGENE LABORATORIES, INC.	M
P	ZYMOGENETICS, INC.	M
P	COOPER DEVELOPMENT CO.	LU
P	TRITON BIOSCIENCES, INC.	LU
P	AMGEN	L
P	BIOGEN	L
P	BIO THERAPEUTICS, INC.	L
P	CALIFORNIA BIOTECHNOLOGY INC.	L
P	CENTOCOR	L
P	CETUS CORPORATION	L
P	CHIRON CORPORATION	L
P	DAMON BIOTECH INC.	L
P	GENENTECH	L
P	GENETICS INSTITUTE, INC.	L
P	GENZYME CORP.	L
P	IMMUNEX CORP.	L
P	INTEGRATED GENETICS, INC.	L
P	INVITRON CORP.	L
P	QUIDEL	L
P	SERONO LABS	L
P	XOMA CORP.	L

VIII-E is a table of personnel information from the returned questionnaires.
Information given (reading across top) is:

- a. total employees
 - b. science/technology employees
 - c. percent of total in sci/tech
 - d. Ph.D. employees
 - e. Ph.D.s as a percent of total employees
 - f. Ph.D.s as a percent of sci/tech employees
 - g. employees in basic scientific research
 - h. percent of sci/tech employees in basic research
 - i. management and administrative employees
 - j. management as a percent of total employees
 - k. management with advanced degrees.
 - l. managers with advanced degrees as a percent of total management
 - m. employees in sales.
 - n. sales employees as a percent of total
 - o. employees in production
 - p. production employees as a percent of total
-
- q. expected revenues of company for current fiscal year in \$millions
 - r. expected revenues per employee in \$thousands.

These data are examined by company size, financing, interest and over all companies.

EMPLOYEE DATA FROM COMPANIES

Median Employee/Co.-30

ANIMAL AGRICULTURE-A
PLANT AGRICULTURE-B
REAGENTS-G
SPECIALTY CHEMICALS-J
DIAGNOSTICS, CLINICAL HUMAN-K
THERAPEUTICS-P

PRIVATE COMPANIES (n=86)
PUBLIC COMPANIES (n=39)
SUBSIDIARIES (n=12)

SMALL COMPANIES (n=55)
MEDIUM COMPANIES (n=51)
LARGE COMPANIES (n=31)

total empl.	sci	%tot	PhD	%tot	%sci	basic %sci	mgt	%tot	adv.	%mgt	sales %tot	prdn %tot	exp revs. thous.\$	rev/empl
Employee Data														
85.9	42	54.3	12	20.8	37	19	46.24	24	26.1	4.6	52.1	6.52	9.03	18
2	1	6	0	0	0	0	0	1	2.6	0	0	0	0	0
1000	370	100	110	75	100	175	101.4	500	82.4	30	100	99	50	450
135	100	99	125	124	94	115	86	92	92	112	83	114	113	103
tot	sci	%tot	phd	%tot	%sci	basic %sci	mgt	%tot	adv	%mgt	sales %tot	prod %tot	exp rev.	rev/empl thous
Revenue Data														
68.8	34	57.4	10	18.5	33.7	7.8	22.41	6.2	12.1	5.4	85	1	3.04	1.2
120	51	57.3	17	23.2	31.9	17	38.02	62	25.5	5.1	47.9	9.18	8.16	75
44.7	8.8	51.9	4.1	20.6	44.6	5.8	43.75	3.5	23.7	1.6	51.7	7.13	14.1	16
29.8	17	44.3	9	18.9	54.2	10	52.78	8	26	4.8	62.5	2	15	4.3
117	40	50.2	9.4	18.2	33.1	16	37.38	31	30.8	4.7	38.5	10.7	9.94	16
123	72	60.2	26	27.3	46.4	45	64.42	26	21	7	58.4	6.26	5.73	19
tot	sci	%tot	phd	%tot	%sci	basic %sci	mgt	%tot	adv	%mgt	sale %tot	prod %tot	exp rev	rev/empl thous
Revenue Data														
39.9	21	52.6	6	21.9	39.4	9.5	42.37	14	31.1	2.9	48.3	4.07	10.9	11
159	83	57.6	25	19.3	33.2	38	48.14	44	17.9	7.4	55.4	11.2	6.29	31
170	52	55	13	17.7	34.6	21	62.06	28	16.7	8	69.8	8.89	4.49	28
tot	sci	%tot	phd	%tot	%sci	basic %sci	mgt	%tot	adv	%mgt	sales %tot	prdn %tot	exp rev	rev/empl thous
Revenue Data														
11.1	6.5	54.7	2.6	26.3	47.5	3.7	45.88	3.6	32.3	1.4	54	1.09	12	2
55.3	35	59.4	10	19.5	31.9	15	50.68	14	22.3	4.6	53.2	3.69	6.9	9.2
267	106	46.4	30	13.7	29.3	47	41.37	68	21.6	11	47	20	7.47	58
total	sci	%tot	PhD	%tot	%sci	basic %sci	mgt	%tot	adv.	%mgt	sales %tot	prdn %tot	exp rev	rev/empl thous

VIII-F is a table of mean employee data broken down by company size,
financing and interests.

Table: Average employee data for U.S. biotechnology companies: Broken down by company classifications

<u>Classification</u>	<u>n</u>	<u>Average No.</u>	<u>Range</u>
All Companies	135	85.9	2-1000
Private Companies	86	39.9	
Public Companies	39	159	
Subsidiary Companies	12	170	
Small Companies (2-20 empl.)	55	11.1	
Medium Companies (21-100 empl.)	51	55.3	
Large Companies (101-1000 empl.)	31	267	
<u>Primary Classification:</u>			
A- Animal Agriculture	6	68.8	17-125
B- Plant Agriculture	13	120	7-625
G- Reagents	9	44.7	5-270
J- Specialty Chemicals	6	29.8	7-100
K- Human Diagnostics	28	117	6-1000
P- Therapeutics	30	123	2-675

The average number of employees per company and number of companies with questionnaires returned are given for each category.

4/87 NCBC

VIII-G is a table of mean employees in U.S. biotechnology companies broken down by employee classification.

VIII-H, which follows, is a figure of some of these data for private companies, public companies, and for all companies.

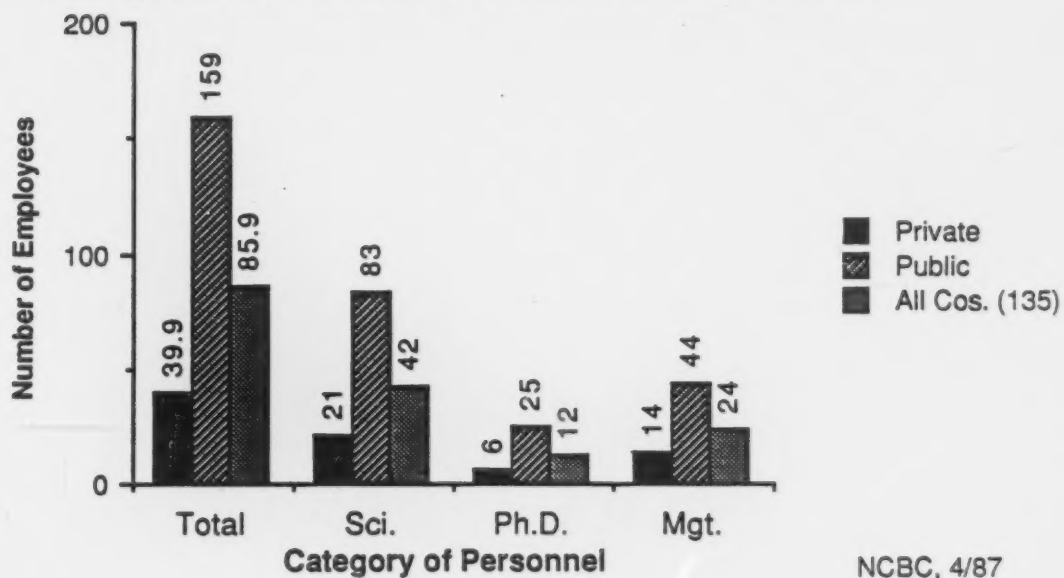
Table: Employee Data for U.S. Biotechnology Companies

Category	n	Average	% of Total
Total Employees	135	85.9	100
Science/Technology Employees	100	42	54.3
Ph.D. Employees	125	12	20.8
Management/Administration	92	24	26.1
Sales	114	6.5	9
Production	103	18	16.7

Data were from returned questionnaires (137 total of 296 companies)
 Not all categories were filled in for all questionnaires, so the number of
 companies responding in that category (n) is shown. The percent of total
 mean employees is also given. Total employee number ranged from 2 to 1000
 with a median of 30 employees per company.

4/87, NCBC

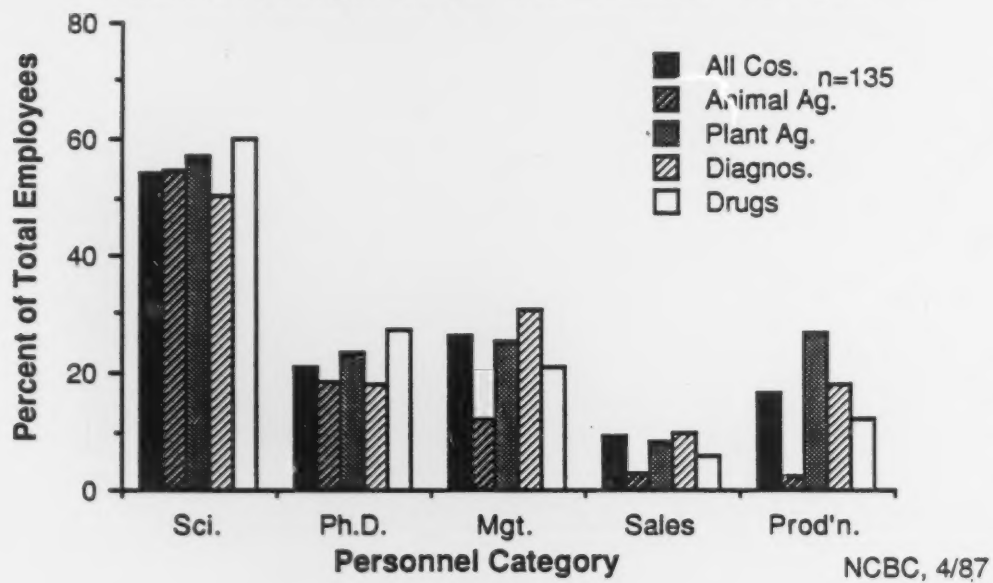
Average Employees in Private/Public/All U.S. Biotech Cos.



NCBC, 4/87

VIII-I is a figure of the percent of Science, Ph.D., Management, Sales and Production employees in 4 of the six major company categories and compared with all companies combined.

Personnel Categories for U.S. Biotech Companies



VIII-J is a table of personnel in science and technology in biotechnology companies, broken down by company interest, and company size.

Table: Personnel in Science and Technology

Category	n	% of Total		of Scientists:	
		in Science	% Ph.D.	% Basic Sci.	
All companies	135	54.3	37	46.2	
Small Companies (2-20 empl)	55	54.7	47.5	45.8	
Medium Companies(21-100 empl)	51	59.4	31.9	50.7	
Large Companies (101-1000 .empl)	31	46.4	29.3	41.4	
Classification:					
A-Animal Agriculture	6	57.4	33.7	22.4	
B-Plant Agriculture	13	57.3	31.9	38.0	
G-Reagents	9	51.9	44.6	43.4	
J-Specialty Chemicals	6	44.3	54.2	52.7	
K-Human Diagnostics	28	50.2	33.1	37.4	
P-Therapeutics	30	60.2	46.4	64.4	

The mean percent of total employees that are engaged in science/technology are given. Also shown are the mean percent of the science/technology employees that are Ph.D.'s or are engaged in "Basic Research".

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Section IX —Patents and Products

IX-A is a listing of product data from the returned questionnaires. The mean number of products introduced per company is shown for the years given (1987 and 1988 values are expected products) as well as the cumulative products for 1981 to 1988. The last column is the mean patent applications on file per company. The numbers after the privately held companies label (39.6 to 172.1) are mean personnel number per company and are not important to this table.

IX-B, which follows is a figure of the mean number of products per year, taken from table IX-A.

PRODUCT AND PATENT DATA

ALL COMPANIES

YEAR	'81	'82	'83	'84	'85	'86	'87	'88	'81-'88	APPS
AVERAGE	3.12	8.6	9.8	11.6	14.1	28.2	20.1	28.6	87.6	27.3
LOW	0	0	0	0	0	0	0	0	0	0
HI	25	200	200	260	330	500	450	500	2260	530
COUNT	49	59	61	72	82	92	103	89	117	111
MEDIAN									11	3

SMALL COMPANIES
MEDIUM SIZED COMPANIES
LARGE COMPANIES

AVERAGE	3.5	17.4	17.7	20.8	29.0	52.4	35.0	50.7	154.3	2.5
AVERAGE	0.7	1.2	2.0	4.6	4.8	5.6	9.7	12.5	30.2	10.1
AVERAGE	5.6	6.5	8.9	9.8	13.4	35.4	19.9	27.2	99.7	93.0

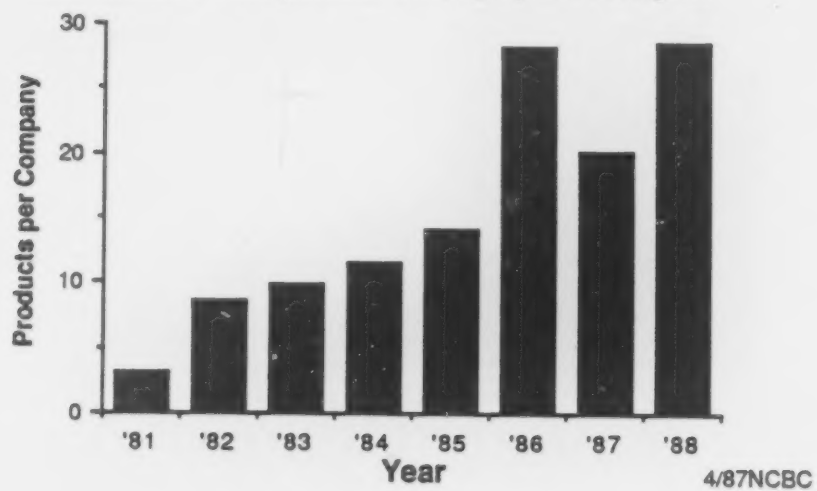
PRIVATELY HELD COMPANIES
PUBLICLY HELD COMPANIES
SUBSIDIARIES

YEAR	'81	'82	'83	'84	'85	'86	'87	'88	'81-'88	APPS
39.6 AVERAGE	2.2	10.0	10.7	13.6	18.3	38.9	25.4	35.6	109.7	8.5
147.0 AVERAGE	3.7	4.9	7.3	9.0	9.9	14.1	16.6	22.9	64.7	69.9
172.1 AVERAGE	7.5	10.3	13.0	11.8	11.3	8.1	5.7	2.8	45.1	8.4

ANIMAL AGRICULTURE--A
PLANT AGRICULTURE--B
REAGENTS--G
SPECIALTY CHEMICALS--J
DIAGNOSTICS, HUMAN--K
THERAPEUTICS--P

YEAR	'81	'82	'83	'84	'85	'86	'87	'88	'81-'88	APPS
AVERAGES	0.0	0.0	1.0	0.3	0.7	6.8	12.8	14.2	28.0	23.0
	0.0	0.0	0.3	0.4	1.0	1.0	1.8	2.0	4.9	12.4
	15.0	85.0	53.4	54.1	72.2	176.2	109.7	142.0	492.6	1.7
	6.0	10.7	28.3	24.5	22.2	37.4	35.7	38.0	164.8	6.4
	3.4	4.1	5.5	11.7	14.7	37.0	14.4	21.4	75.2	30.2
	1.1	1.4	2.3	2.6	3.3	4.3	4.5	6.0	18.6	80.0

U.S. Biotech Companies—average products/year



IX-C is a table of the number of patents per company and number of patent applications per company.

IX-D, which follows is a figure of mean biotechnology company patents per year for 1981 to 1987.

IX-E is a figure of total biotechnology patents awarded (and expected) per year from 1981 to 1988, corrected for all companies in the database.

NOTE, that when patent application information is corrected for the 296 companies in our database, there is an extrapolated total of 8080 patent applications for these companies.

BIOTECHNOLOGY PATENTS---FROM NCBC/OTA QUESTIONNAIRE

PATENTS 1981 TO 1987(EXPECTED)

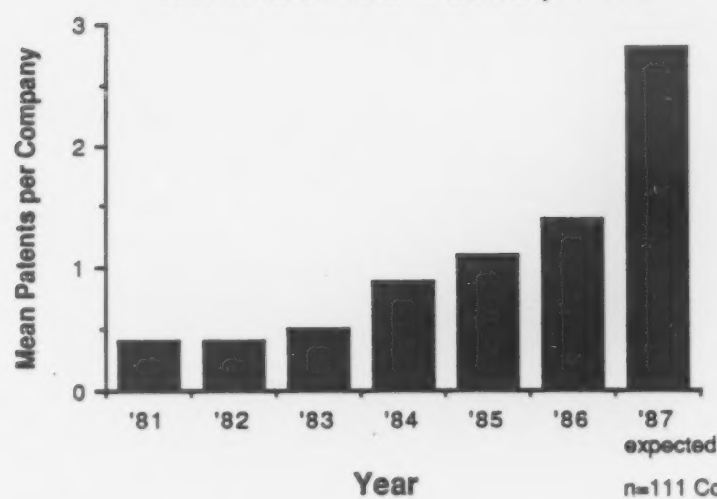
PATENT TOTALS	NO OF COMPANIES	% OF COMPANIES
0	28	25%
1-2	30	27%
3-5	22	19%
5-10	21	19%
10-25	10	9%
25-100	2	2%
100+	0	0%
TOTAL	113	

PATENT APPLICATIONS PENDING

NO. OF APPLICATIONS	NO. OF COMPANIES	PERCENT OF TOTAL
0	25	22%
1	13	11%
2	14	12%
3-10	33	29%
11-100	24	22%
101-200	1	1%
200+	5	4%
TOTAL	115	

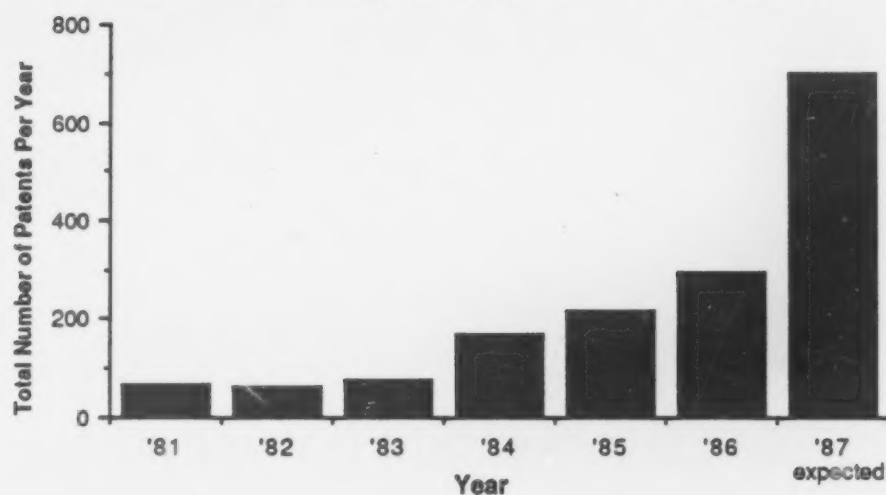
There were 115 of 137 responding to this question. 21 companies had no patents and none pending, or 18% of the responders.

U.S. Biotech Cos.—Patents per Year



n=111 Cos. 4/87NCBC

U.S. Biotechnology Industry—Total Patents per Year



(n=111, corrected for whole industry) 4/87NCBC

REPORT ON THE BIOTECHNOLOGY INDUSTRY IN THE
UNITED STATES

PREPARED FOR THE U.S. CONGRESSIONAL
OFFICE OF TECHNOLOGY ASSESSMENT

BY
THE BUSINESS STUDIES PROGRAM
NORTH CAROLINA BIOTECHNOLOGY CENTER

APPENDICES

FINAL DRAFT
MAY 1, 1987

CONTRACT NUMBER H3-2025.0
COST CODE 2311

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APPENDICES

NOTE: These Appendices contain confidential data on individual biotechnology companies or additional data that were provided to the OTA, but are beyond the scope of the work. The Appendices section is not for general distribution, and is for NCBC/OTA use only.

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NORTH CAROLINA BIOTECHNOLOGY CENTER COMPANIES DATABASE
BIOTECHNOLOGY COMPANIES IN THE U.S.

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1	A/G TECHNOLOGY CORP. 34 WEXFORD ST. NEEDHAM MA 02194 PHONE:6174495774	PRES:ARYE GOLLAN, PHD R&D DIR: PRODUCTS:GAS SEPARATION;ULTRA & MICRO FILTRATION EMPLOYEES: 8	YEAR:1981 CODE:E FINANCING:PRI
2	ADVANCED BIOTECHNOLOGIES 12150 Tech Rd. Silver Spring MD 20904 PHONE:3016225212	PRES:DR JamesE Whitman,Jr R&D DIR:same PRODUCTS:MEDIA, SERA, GROWTH FACTORS EMPLOYEES: 17	YEAR:1982 CODE:G FINANCING:PRI
3	ADVANCED GENETIC SCIENCES 6701 San Pablo Ave. Oakland CA 94608 PHONE:4155472395	PRES:JOHN R BEDBROOK, PHD R&D DIR: PRODUCTS:RESEARCH FOR AGRI, FROSTBAN, SNOMAX EMPLOYEES: 93	YEAR:1979 CODE:B FINANCING:PUB
4	ADVANCED GENETICS RES. INST. 2220 Livingston St. Oakland CA 94606 PHONE:4155342474	PRES:ROBERT J KUNZE R&D DIR: PRODUCTS:VETERINARY VACCINES EMPLOYEES: 25	YEAR:1980 CODE:V FINANCING:SUB
5	ADVANCED MAGNETICS, INC. 45 Spinelli Place Cambridge MA 02138 PHONE:6174972070	PRES:Jerome Goldstein R&D DIR:Ernest Groman Ph.D. PRODUCTS:DIAG RIA KITS, MAG SEPARATION RGNTS EMPLOYEES: 30	YEAR:1981 CODE:K FINANCING:PUB
6	ADVANCED MINERAL TECHNOLOGIES 5920 MCINTYRE GOLDEN CO 80403 PHONE:3032796982	PRES:DR CORALE L.BRIERLEY R&D DIR:DR JAMES A BRIERLEY PRODUCTS:WASTE TREAT & METAL RECOVER EMPLOYEES: 14	YEAR:1982 CODE:R FINANCING:PRI
7	AGDIA, INC. 1901 N. Cedar St. Mishawaka IN 46545 PHONE:2192552817	PRES:DR CHESTER L SUTULA R&D DIR: PRODUCTS:PLANT AND FOOD TOX DX FOR VIRUSES EMPLOYEES: 8	YEAR:1981 CODE:B FINANCING:PRI
8	AGOURON INSTITUTE 505 COAST BLVD. S. LA JOLLA CA 92037 PHONE:6194565300	PRES:MELVIN I SIMON R&D DIR:M. SILVERMAN PRODUCTS:BASIC RESEARCH IN BIOTECH, NON PROFIT EMPLOYEES:	YEAR:1979 CODE:W FINANCING:PRI
9	AGRACETUS 8520 Universtiy Ave Middleton WI 53562 PHONE:6088367300	PRES:Robert A. Fildes(CA) R&D DIR:Winston J. Brill PhD PRODUCTS:TERMITICIDE, VACCINES, MICROBIAL INOCUL EMPLOYEES: 65	YEAR:1981 CODE:B FINANCING:PRI

NORTH CAROLINA BIOTECHNOLOGY CENTER COMPANIES DATABASE
BIOTECHNOLOGY COMPANIES IN THE U.S.

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10	AGRI-DIAGNOSTICS ASSOCIATES 2611 Branch Pike Cinnaminson NJ 08077 PHONE:6098290110	PRES: R&D DIR:DR W.R.SHARP (VP) PRODUCTS:TURF & CROP DISEASE DIAGNOSTIC KITS EMPLOYEES: 22	YEAR:1984 CODE:K FINANCING:PRI
11	AGRIGENETICS CORPORATION 29400 LAKE LAND BLVD WICKLIFFE OH 44092 PHONE:2169434200	PRES:R. N. Dryden, Jr. R&D DIR:Joe L. Key PRODUCTS:SEED AND PLANT GENETICS EMPLOYEES:	YEAR:1980 CODE:B FINANCING:SUB
12	AGRITECH SYSTEMS, INC 104 FORE ST. PORTLAND ME 04101 PHONE:2077744334	PRES:DAVID SHAW R&D DIR:IRWIN WORKMAN PRODUCTS:IMMUNOASSAYS EMPLOYEES: 70	YEAR:1984 CODE:K FINANCING:PRI
13	AGROTEK 1465 Post Road E.,PO-5117 Westport CT 06881 PHONE:2032592829	PRES:DR THOMAS J MONAHAN R&D DIR:Paul R. Greenman PRODUCTS:PESTICIDES, NEMATODES EMPLOYEES:	YEAR:1983 CODE:B FINANCING:SUB
14	ALFACELL CORPORATION 225 BELLEVILLE AV. BLOOMFIELD NJ 07003 PHONE:2017488082	PRES:DR. KUSLIMA SHOGEN R&D DIR: PRODUCTS:TUMOR TOXINS, REAGENTS, SERA EMPLOYEES: 22	YEAR:1981 CODE:G FINANCING:PUB
15	ALLELIC BIOSYSTEMS RT.1, BOX 230 KEARNEYSVILLE WV 25430 PHONE:3047255255	PRES:STEVAN R PHELPS R&D DIR:DR WM SCHILL PRODUCTS:VET TOX TESTS, PROBES, OLIGOS, REAGENTS EMPLOYEES:	YEAR:1984 CODE:V FINANCING:PRI
16	ALPHA I BIOMEDICALS 777 14TH ST., NW, SUITE 747 WASHINGTON DC 20005 PHONE:2026289898	PRES:JJ FINKELSTEIN R&D DIR: PRODUCTS:PEPTIDES TO PREV,DIAG &TREAT IMMUNEDEFIC EMPLOYEES: 9	YEAR:1982 CODE:P FINANCING:PUB
17	AMBICO, INC. P.O. Box 522, Rte. 2 Dallas Center IA 50063 PHONE:5159923747	PRES:DR. C. Joseph Welter R&D DIR:GERALD R.FITZGERALD PRODUCTS:VET VACCINES; EMPLOYEES: 25	YEAR:1974 CODE:V FINANCING:PRI
18	AMERICAN BIOCLINICAL 4432 S.E. 16th Ave. Portland OR 97202 PHONE:8005473686	PRES:MR.Ray R. Rodgers R&D DIR:Steve Weitz PRODUCTS:REAGENTS;DX KITS; EMPLOYEES: 24	YEAR:1977 CODE:G FINANCING:PRI

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19	AMERICAN BIOGENETICS CORP 19732 MACARTHUR BLVD IRVINE CA 92715 PHONE:7148517733	PRES:MR DANE A HOIBERG R&D DIR: PRODUCTS:PROCESS DESIGN MICROORGANISMS-CHEMICALS EMPLOYEES: 10	YEAR:1984 CODE:I FINANCING:PRI
20	AMERICAN BIONETICS, INC (ABN) 4560 HORTON ST EMERYVILLE CA 94608 PHONE:4156524466	PRES:MARTIN E. MARKS R&D DIR:SYLVIA B.R. WU PRODUCTS:ORGANIC & BIOCHEM COMPS EMPLOYEES: 22	YEAR:1981 CODE:G FINANCING:PRI
21	AMERICAN BIOTECHNOLOGY CO 7658 STANDISH PL, SUITE 107 ROCKVILLE MD 20855 PHONE:3012949553	PRES:DR ROBERT W. VELTRI R&D DIR: PRODUCTS:GROWTH FACTORS EMPLOYEES: 5	YEAR:1984 CODE:P FINANCING:PRI
22	AMERICAN DIAGNOSTICA, INC. 111 NORTH STREET GREENWICH CT 06830 PHONE:2036614331	PRES:DR. RICHARD HART R&D DIR: PRODUCTS:T-PA ELISA, T-PA ACTIVE ASSAY KITS, ETC EMPLOYEES: 9	YEAR:1983 CODE:K FINANCING:PRI
23	AMERICAN LABORATORIES, INC 4410 SOUTH 102 ST OMAHA NE 63127 PHONE:4023392494	PRES:JEFFREY JACKSON R&D DIR:JACK JACKSON PRODUCTS:RAW MATERIALS OF BIOTECHNOLOGY PRODUCTS EMPLOYEES: 26	YEAR:1962 CODE:P FINANCING:PRI
24	AMERICAN QUALEX INTL, INC 14620 E. Firestone BLVD La Mirada CA 90638 PHONE:7145213753	PRES:MR Daniel R.Moothart R&D DIR:A. MOOTHART PRODUCTS:ANTIBODIES;ENZYMES;DNA-PROBS;INSTURMENTS EMPLOYEES: 10	YEAR:1981 CODE:G FINANCING:PRI
25	AMGEN 1900 Oak Terrace LA Thousand Oaks CA 91320 PHONE:8054995725	PRES:DR George B. Rathman R&D DIR:DR Daniel Vapnek PRODUCTS:RESEARCH REAGENTS EGF, IGF, IFN, ETC. EMPLOYEES: 215	YEAR:1980 CODE:P FINANCING:PUB
26	AMTRON 701 EAST BAY ST. CHARLESTON SC 29403 PHONE:8035772931	PRES:ROY SMITH R&D DIR:GREGORY WILSON PRODUCTS:ANIMAL DISEASE PREVENTATIVES-PROPIETARY EMPLOYEES: 16	YEAR:1981 CODE:V FINANCING:PRI
27	AN-CON GENETICS 1 HUNTINGTON QUADRANGLE MELVILLE NY 11747 PHONE:5166948470	PRES:ABRAHAM CONCOOL,J.D. R&D DIR:ROBERT LEDLEY PRODUCTS:EQUIP;INSTRU EMPLOYEES: 3	YEAR:1982 CODE:F FINANCING:SUB

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28	ANGENICS 100 INMAN ST CAMBRIDGE MA 02139 PHONE:6178766468	PRES:MR L ROBERT JOHNSON R&D DIR:VICKI L. SATO PRODUCTS:SCREENING TESTS FOR MILK AND DRUG ABUSE EMPLOYEES: 50	YEAR:1980 CODE:K FINANCING:PRI
29	ANTIBODIES, INC. P.O. Box 1560 Davis CA 95617 PHONE:8008248540	PRES:DR JAMES HILLMAN R&D DIR:GENMAN-MS P ADCOCK PRODUCTS:VET DX EMPLOYEES: 35	YEAR:1961 CODE:V FINANCING:PRI
30	ANTIVIRALS, INC 249 SW AVERY CORVALLIS OR 97333 PHONE:5037533133	PRES:DR JAMES SUMMERTON R&D DIR: PRODUCTS:NEU-GENES FOR DIAGN & THERAP USE EMPLOYEES: 6	YEAR:1980 CODE:K FINANCING:PRI
31	APPLIED BIOSYSTEMS 850 Lincoln Center Drive Foster City CA 94404 PHONE:4155706667	PRES:Andre Marion R&D DIR: PRODUCTS:DNA SYNTHESIZER;PEPTIDE SEQUENCER;REAGEN EMPLOYEES: 350	YEAR:1981 CODE:F FINANCING:PUB
32	APPLIED BIOTECHNOLOGY 80 Rogers St. Cambridge MA 02142 PHONE:6174927289	PRES:MR Steven M Peltzman R&D DIR:Bryan Roberts PRODUCTS:VET VACCINES;HUMAN VACCINES & DX EMPLOYEES:	YEAR:1984 CODE:V FINANCING:PRI
33	APPLIED GENETICS LABS. INC. 3150 S. Babcock St. Melbourne FL 32901 PHONE:3057688188	PRES:John C. Hozier R&D DIR: PRODUCTS:GENETIC TOX TEST EMPLOYEES: 3	YEAR:1984 CODE:K FINANCING:PRI
34	APPLIED MICROBIOLOGY Brooklyn Navy Yards Bldg5 Brooklyn NY 11205 PHONE:7188524676	PRES:Dr. David Guttman R&D DIR:Paul Recsei PRODUCTS:HEALTH CARE EMPLOYEES: 20	YEAR:1983 CODE:S FINANCING:PRI
35	APPLIED PROTEIN TECHNOL. INC 103 Brookline St. Cambridge MA 02139 PHONE:6178686085	PRES:Marcus J. Horn R&D DIR: PRODUCTS:INSTRU TO AUTOMAT PEPTIDE & PROTEIN CHEM EMPLOYEES: 5	YEAR:1984 CODE:F FINANCING:PRI
36	ATLANTIC ANTIBODIES 10 Nonesuch Rd. Scarborough ME 04074 PHONE:8003433430	PRES:JAMES C. FOSTER R&D DIR:DENNY BARRANTES PRODUCTS:IMMUNODX TEST KITS; REAGENTS EMPLOYEES: 60	YEAR:1973 CODE:G FINANCING:SUB

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37	AUTOMEDIX SCIENCES, INC 9401 S VERMONT AVE, SUITE B100 TORRANCE CA 90502 PHONE:2133271112	PRES:ROBERT MURTFELDT R&D DIR: PRODUCTS:NONE AS YET, STAFFING STARTED ON 7/86 EMPLOYEES: 6	YEAR:1978 CODE:P FINANCING:PRI
38	BALL BIOTECH COMPANY 250 TOWN RD. W. CHICAGO IL 60185 PHONE:3122313600	PRES:DR WARREN BANNER R&D DIR: PRODUCTS:PLANT VARIETIES EMPLOYEES: 25	YEAR:1985 CODE:O FINANCING:PRI
39	BEHRING DIAGNOSTICS 10933 N. Torrey Pines Rd. La Jolla, CA 92037 PHONE:8008549256	PRES:DR. Werner Shaefer R&D DIR:F. Behrens PRODUCTS:ANTIBDS;REAGENTS-CALBIOCHEM EMPLOYEES:	YEAR:1952 CODE:K FINANCING:SUB
40	BEND RESEARCH, INCORPORATED . 64550 RESEARCH ROAD BEND OR 97701 PHONE:5033824100	PRES:DR PAUL van EIKREN R&D DIR: PRODUCTS:SEPARATION;BIOSENSORS;IMMOBILIZED ENZYME EMPLOYEES: 45	YEAR:1975 CODE:E FINANCING:PRI
41	BENTECH LABORATORIES 635 WATER AVE EAST ALBANY OR 97321 PHONE:5039289004	PRES:DR CHRIS BENTLEY R&D DIR: PRODUCTS:YIELD ENHANCING AGENT;ANTIFUNGAL;HEALING EMPLOYEES: 7	YEAR:1984 CODE:B FINANCING:PRI
42	BERKELEY ANTIBODY 4131 LAKESIDE DR SUITE B RICHMOND CA 94806 PHONE:4152224940	PRES:MR. EDWARD BASS R&D DIR:2 PRODUCTS:DEVELOP CUSTON ANTIBODIES MAB & POLYCLON EMPLOYEES: 20	YEAR:1983 CODE:S FINANCING:PRI
43	BETHYL LABS INC. PO BOX 850 Montgomery TX 77356 PHONE:4095976111	PRES:HENRY F CARWILE,DVM R&D DIR:James Billings PRODUCTS:ANTISERA & CUSTOM ANTISERA SERVICE EMPLOYEES: 8	YEAR:1977 CODE:S FINANCING:PRI
44	BINAX, INC 95 DARLING AVE SO PORTLAND ME 04106 PHONE:2077723544	PRES:DR V WATKINS R&D DIR:DR GELSON TORO PRODUCTS:MABS, DX TEST KITS,VET DX EMPLOYEES: 12	YEAR:1986 CODE:K FINANCING:PRI
45	BIO HUMA NETICS 201 ROOSEVELT AV CHANDLER AZ 85226 PHONE:6029611220	PRES:MR DEL BENTZ R&D DIR:DR JORDAN C SMITH PRODUCTS:SOIL CONDITIONERS;FEED SUPPLMTS;WASTE TH EMPLOYEES: 15	YEAR:1984 CODE:B FINANCING:PRI

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| 46 | BIO TECHNIQUES LABS., INC.
15555 NE 33 ST, BIOTECH RD
Redmond WA 98052
PHONE:2068839518 | PRES:MR. William St.John
R&D DIR:Richard Moore, Ph.D.
PRODUCTS:FEED ADDITIVES;
EMPLOYEES: 35 | YEAR:1982 CODE:A
FINANCING:PRI |
| 47 | BIO-RECOVERY, INC.
P.O. 38, 193 PARIS AVE
Northvale NJ 07647
PHONE:2017849396 | PRES:PAUL HELLMAN
R&D DIR:LAWRENCE NIESEN
PRODUCTS:MEMBRANE SYSTEMS FOR FILTRATION
EMPLOYEES: 49 | YEAR:1983 CODE:F
FINANCING:PRI |
| 48 | BIO-RESPONSE INC.
1978 W WINTON AVE.
HAYWARD CA 94545
PHONE:4157869744 | PRES:ALFRED G. DANIEL
R&D DIR:Samuel Rose
PRODUCTS:TPA;MASS CELL CULTURE;
EMPLOYEES: 45 | YEAR:1972 CODE:P
FINANCING:PUB |
| 49 | BIO-TECHNICAL RESOURCES, INC.
1035 SOUTH 7TH ST.
MANITOWOC WI 54220
PHONE:4146845518 | PRES:MICHAEL R. SFAT
R&D DIR:THOMAS SKATRUD
PRODUCTS:YEAST/BACT PRODS IN FOOD, BREWING,CHEM&C
EMPLOYEES: 25 | YEAR:1962 CODE:F
FINANCING:PRI |
| 50 | BIOASSAY SYSTEMS CORP.
225 WILDWOOD AV
WOBBURN MA 01801
PHONE:6179339299 | PRES:MR M S COLY (ACTING)
R&D DIR:SAME
PRODUCTS:ANAL., PURIF, TESTING OF PEPTIDES;DIAGN
EMPLOYEES: 65 | YEAR:1977 CODE:I
FINANCING:SUB |
| 51 | BIOCHEM TECHNOLOGY INC
66 GREAT VALLEY PKWY
MALVERN PA 19355
PHONE:2156478610 | PRES:DR WM B ARMINGER
R&D DIR:
PRODUCTS:COMPUTER PRODS & SOFTWARE; NADH DETECTOR
EMPLOYEES: 10 | YEAR:1977 CODE:D
FINANCING:PRI |
| 52 | BIOCLINICAL SYSTEMS, INC
5977 SW AV
ST LOUIS MO 63139
PHONE:3146473244 | PRES:JOHN HUANG
R&D DIR:
PRODUCTS:DIAGNOSTICS
EMPLOYEES: | YEAR: CODE:K
FINANCING:SUB |
| 53 | BIOCONSEP, INC.
RD 3 HOMESTEAD RD BLD 5 UNIT
BELLEMEAD NJ 08502
PHONE:2013596886 | PRES:THOMAS BRADSHAW
R&D DIR:JAMES WILLIS
PRODUCTS:BIOL SEPARATIONS R AND D AND EQUIP
EMPLOYEES: 6 | YEAR:1983 CODE:E
FINANCING:PRI |
| 54 | BIOCONTROL SYSTEMS
21414 68th AV. SOUTH
Kent WA 98032
PHONE:2068728500 | PRES:Max Lyon
R&D DIR:Robert Ward
PRODUCTS:TESTS FOR FOOD WATER ETC, BIOSENSORS
EMPLOYEES: 14 | YEAR:1985 CODE:Y
FINANCING:PRI |

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55	BIOPEN 14 Cambridge Center Cambridge MA 12142 PHONE:6178648900	PRES:DR JAMES L VINCENT R&D DIR:Richard A. Flavell PRODUCTS:HEPATITIS B CORE ANTIGEN EMPLOYEES: 360	YEAR:1979 CODE:P FINANCING:PUB
56	BIOGENEX LABORATORIES 6549 Sierra Lane Dublin CA 94568 PHONE:8004214149	PRES:Kirshan Kalra R&D DIR: PRODUCTS:DIAGN TESTS=RIA; IMM'HIS'CHEM; KITS; REAGEN EMPLOYEES: 30	YEAR:1981 CODE:K FINANCING:PRI
57	BIOLOGICAL ENERGY CORP. PO 766, 2650 EISENHOWER AVE VALLEY FORGE PA 19482 PHONE:2156309630	PRES:DR. E. KENDALL PYE R&D DIR: PRODUCTS:BIOMASS CONV FOR ALCOHOLS, SUGARS, ETC EMPLOYEES: 13	YEAR:1981 CODE:C FINANCING:PRI
58	BIOLOGICS CORP 2720 NORTH 84TH ST OMAHA NE 68134 PHONE:4023937440	PRES:DR.MIKE BARTOWSKI R&D DIR: PRODUCTS:PSEUDORABIES VACCINE EMPLOYEES: 85	YEAR:1966 CODE:V FINANCING:SUB
59	BIOMATERIALS INTERNATIONAL, INC PO 8852, 420 CHIPETA WAY, STE 160 SALT LAKE CITY UT 84108 PHONE:8015838444	PRES:LEE M SMITH R&D DIR: PRODUCTS:RAMAN TECH FOR RESPIR APPS; GAS MONITOR EMPLOYEES: 15	YEAR:1981 CODE:D FINANCING:PRI
60	BIOMATRIX, INC. PO 530, 65 RAILROAD AV RIDGEFIELD NJ 07657 PHONE:2019459550	PRES:ENDRE A. BALAZS R&D DIR:JANET L DENLINGER PRODUCTS:MATERIAL FOR ARTIF ORGANS; COSMET; OPHTHAL EMPLOYEES:	YEAR:1981 CODE:W FINANCING:PRI
61	BIOMED RESEARCH LABS INC 1115 E. Pike St. Seattle WA 98122 PHONE:2063240380	PRES:DR. JOHN J MAJNARICH R&D DIR:THOS. GOODRICH PRODUCTS:FISH BIOLOGICS, VET EMPLOYEES:	YEAR:1974 CODE:V FINANCING:PRI
62	BIOMEDICAL TECHNOLOGIES 378 PAGE STREET STOUGHTON MA 02072 PHONE:6173449942	PRES:MAURICE LAMARQUE R&D DIR: PRODUCTS:CELL CULTURE REAGENTS; ANTIBODIES; KITS EMPLOYEES: 7	YEAR:1981 CODE:J FINANCING:PRI
63	BIONETICS RESEARCH 5516 NICHOLSON LANE KENSINGTON MD 20895 PHONE:3018815600	PRES: R&D DIR: PRODUCTS:CLINICAL DIAGNOSTICS; RESEARCH REAGENTS EMPLOYEES:	YEAR:1986 CODE:W FINANCING:PRI

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64	BIONIQUE LABS INC. Bloomingdale Rd RT#3 Saranac Lake NY 12983 PHONE:5188912356	PRES:DR. Michael Gabridge R&D DIR: PRODUCTS:CULTUR CHAMBER;MYCOPLASMA DETEC SYST;DIA EMPLOYEES: 9	YEAR:1982 CODE:H FINANCING:PRI
65	BIOPOLYMERS, INC. 309 FARMINGTON AVE FARMINGTON CT 06032 PHONE:2036741444	PRES:THOMAS M. BENEDICT R&D DIR: PRODUCTS:CELL & TISSUE ADHESIVE; OPTHAL ADHESIVE EMPLOYEES: 15	YEAR:1984 CODE:S FINANCING:PRI
66	BIOPROBE INTERNATIONAL, INC. 2842 WALNUT AVE. SUITE C TUSTIN CA 92680 PHONE:7145444035	PRES:MR. RAPHAEL WONG R&D DIR:DR. THAT L. NGO PRODUCTS:SPECIALIZED GELS; SEPARATION DEVISE, ETC EMPLOYEES: 15	YEAR:1983 CODE:E FINANCING:PRI
67	BIOPRODUCTS FOR SCIENCE, INC. PO BOX 29176 INDIANAPOLIS IN 46229 PHONE:6082742905	PRES:HAL P. HARLAN R&D DIR:PAUL A. COULIS PRODUCTS:ANTIBODIES;ANTIGEN MARKERS;REAGENTS EMPLOYEES: 19	YEAR:1985 CODE:X FINANCING:PRI
68	BIOPURE 136 Harrison Ave. Boston MA 02111 PHONE:6173507800	PRES:Brian McGuinn R&D DIR:Bing L Wong, Ph.D. PRODUCTS:CUSTOM FERM. OF THERAP, MAB,CHEMICALS EMPLOYEES: 16	YEAR:1984 CODE:O FINANCING:PRI
69	BIOSCIENCE MANAGEMENT INC. BFTC-South Mountain Dr. Bethlehem PA 18015 PHONE:2158610291	PRES:THOMAS G. Zitrides R&D DIR:M.P. Pirnik, Ph.D. PRODUCTS:BACTERIAL CULTURES;INNOCULANTS;INSTRUMEN EMPLOYEES: 8	YEAR:1984 CODE:J FINANCING:PRI
70	BIOSEARCH, INC. 2980 Kerner Blvd. San Rafael CA 94901 PHONE:8002272624	PRES:MR. David Harnden R&D DIR:Ron Cook PRODUCTS:REAGENT CHEMICALS AND GENE/PEPTIDE INSTS EMPLOYEES:	YEAR:1977 CODE:G FINANCING:SUB
71	BIOSPHERICS 4928 WYACONDA RD ROCKVILLE MD 20852 PHONE:3017707700	PRES:DR.GILBERT V LEVIN R&D DIR:SAME PRODUCTS:WASTEWATER PROCESS & MONITORS &PILOT PLT EMPLOYEES: 250	YEAR:1967 CODE:S FINANCING:PUB
72	BIOSTAR MEDICAL PRODUCTS, INC. 5766 Central Ave. Boulder CO 80301 PHONE:3034471605	PRES:TIMOTHY W. STARZL R&D DIR:Michael D. Roper, PhD PRODUCTS:DIAGNOSTICS & TEST KITS FOR AUTOIMM.DIS EMPLOYEES: 30	YEAR:1983 CODE:K FINANCING:PRI

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73	BIOSYSTEMS, INC. 762 U.S. Highway 78 Loganville GA 30249 PHONE:4044661511	PRES:DR PAUL BATRA R&D DIR: PRODUCTS:GENERAL R AND D MICROBIAL EMPLOYEES:	YEAR:1976 CODE:R FINANCING:PRI
74	BIOTECH RESEARCH LABS, INC 1600 EAST GUDE DRIVE ROCKVILLE MD 20850 PHONE:3012510800	PRES:MR.THOMAS M. LI R&D DIR: PRODUCTS:MABS FOR DIAGNOSTICS, IL-2 EMPLOYEES: 101	YEAR:1973 CODE:K FINANCING:PUB
75	BIOTECHNICA INTERNATIONAL 85 Bolton St. Cambridge MA 02140 PHONE:6178640040	PRES:DR NORMAN JACOBS R&D DIR:Lynn C. Klotz PRODUCTS:DIAG TEST; INNOCULANT, LITE BEER, ETC EMPLOYEES: 145	YEAR:1981 CODE:B FINANCING:PUB
76	BIOTECHNOLOGY DEVELOPMENT CORP 44 Mechanic Street Newton MA 02164 PHONE:6179657255	PRES:Irwin J. Gruverman R&D DIR:John J. King, Ph.D. PRODUCTS:EQUIPMENT, CONSULTING, REAGENTS EMPLOYEES: 35	YEAR:1982 CODE:F FINANCING:PUB
77	BIOTECHNOLOGY GENERAL CORP. 375 Park Ave. New York NY 10152 PHONE:2123198944	PRES:SIM FASS, Ph.D. R&D DIR:Marian Gorecki, Ph.D. PRODUCTS:SOD, BGH, HGH EMPLOYEES: 78	YEAR:1980 CODE:P FINANCING:PUB
78	BIOTEST DIAGNOSTICS CORP 6 DANIEL RD, E. FAIRFIELD NJ 07006 PHONE:2015754500	PRES:DR. ROBT W PERRY R&D DIR: PRODUCTS:REAGENTS AND MAB MARKERS EMPLOYEES:	YEAR:1946 CODE:G FINANCING:SUB
79	BIOTHERAPEUTICS, INC. Riverside Drive Franklin TN 37064 PHONE:6157944797	PRES:Louis P. Berneman R&D DIR:Robert K. Oldham, MD PRODUCTS:SPECIALTY BIOLOGICAL RESPONSE MODIFIERS EMPLOYEES: 120	YEAR:1984 CODE:P FINANCING:PUB
80	BIOTHERAPY SYSTEMS, INC. 291 N. Bernardo Ave. Mountain View CA 94043 PHONE:4159401200	PRES:DR. WM RASTETER R&D DIR:Richard A. Miller, MD PRODUCTS:MABS FOR CANCER THERAPY EMPLOYEES: 8	YEAR:1984 CODE:P FINANCING:PUB
81	BIOTHERM PO BOX 13417 RTP NC 27709 PHONE:9195442952	PRES:MR BRUCE OBERHARDT R&D DIR: PRODUCTS:DIAGNOSTICS EMPLOYEES:	YEAR:1986 CODE:K FINANCING:PRI

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82	BIOTICS RESEARCH CORPORATION 4850 WRIGHT RD, SUITE 150 STAFFORD TX 77047 PHONE:7137899020	PRES:DENNIS DELUCA R&D DIR: PRODUCTS:NUTRITIONAL SUPPLEMENTS EMPLOYEES: 22	YEAR:1975 CODE:M FINANCING:PRI
83	BRAIN RESEARCH INC. 46 E 91 ST NEW YORK NY 10028 PHONE:2128316645	PRES:ELENORE S. BOGOCH R&D DIR: PRODUCTS:CANCER DIAGNOSTICS EMPLOYEES:	YEAR:1968 CODE:K FINANCING:PRI
84	BREIT LABORATORIES 2510 BOATMAN AV W. SACRAMENTO CA 95691 PHONE:9163724088	PRES:MICHAEL SHEPHERD R&D DIR:LE ROY KONDO PRODUCTS:MAB BASED DISPOSABLE MEDICAL DIAGNOSTICS EMPLOYEES: 15	YEAR:1983 CODE:K FINANCING:PRI
85	CALGENE, INC. 1920 5th St. Davis CA 95616 PHONE:9167536313	PRES:Roger Salquist R&D DIR:Robert Goodman, Ph.D. PRODUCTS:TOMATOES, COTTON, FOOD PROC., EMPLOYEES: 165	YEAR:1980 CODE:B FINANCING:PUB
86	CALIFORNIA BIOTECHNOLOGY INC. 2450 Bayshore Frontage Rd Mountain View CA 94043 PHONE:4159661550	PRES: R&D DIR:John Shine, Ph.D. PRODUCTS:QUESTIONNAIRE STATES ZERO PRODUCTS EMPLOYEES: 155	YEAR:1981 CODE:P FINANCING:PUB
87	CALIFORNIA INTEGRATED DIAGNOSTICS 1440 FOURTH ST BERKELEY CA 94710 PHONE:4155279400	PRES:DR. MARK S. TANAKA R&D DIR: PRODUCTS:MAB TEST KITS FOR DIAG OF SEX TRAN DIS EMPLOYEES: 17	YEAR:1981 CODE:K FINANCING:SUB
88	CALZYME LABORATORIES, INC. 3443 MIGUELITO CT SAN LUIS OBISPO CA 93401 PHONE:8055415754	PRES:DR. MUZAFFAR IQBAL R&D DIR: PRODUCTS:ENZYMES & BIOCHEMICALS EMPLOYEES: 10	YEAR:1983 CODE:J FINANCING:PRI
89	CAMBRIDGE BIOSCIENCE CORP. 35 SOUTH ST. HOPKINTON MA 01748 PHONE:6174359071	PRES:GERALD F. BUCK R&D DIR:DANTE J. MARCIANI PRODUCTS:DX KITS FOR AIDS, ADENOVIRUS, ROTAVIRUS EMPLOYEES: 55	YEAR:1981 CODE:K FINANCING:PUB
90	CENTOCOR 244 GREAT Valley Pkw Malvern PA 19355 PHONE:2152964488	PRES:Hubert Schoemaker R&D DIR:Vincent R. Zurawski PRODUCTS:DIAGNOSTIC BLOOD TESTS FOR CANCER & HEPB EMPLOYEES: 246	YEAR:1979 CODE:P FINANCING:PUB

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91	CETUS CORPORATION 1400 FIFTY-THIRD ST. EMERYVILLE CA 94608 PHONE:4154203300	PRES:ROBERT A. FILDES,PHD YEAR:1971 CODE:P R&D DIR:JEFFREY S. PRICE,PHD FINANCING:PUB PRODUCTS:INTERFERON;INTERLEUKIN-2;MAB;ANTI-NEOPL EMPLOYEES: 675
92	CHARLES 688 MAIN ST. BUFFALO NY 14202 PHONE:7168426270	PRES:RICHARD MONTAGNA YEAR:1982 CODE:K R&D DIR:L. PAPSIDERO FINANCING:PUB PRODUCTS:DIPSTIK DIAGNOS TESTS KITS EMPLOYEES:
93	CHARLES RIVER BIOTECH.SERVICES 251 BALLARDVALE ST. WILMINGTON MA 01887 PHONE:6176576500	PRES:JAMES C. FOSTER, JD YEAR:1983 CODE:X R&D DIR:MELVIN W. BALK,DVM FINANCING:SUB PRODUCTS:MABS, CULTURE SYSTEMS EMPLOYEES:
94	CHEMGENES 925 WEBSTER ST. NEEDHAM MA 02192 PHONE:6174495051	PRES:DR. S. SRIVASTAVA YEAR:1981 CODE:G R&D DIR: FINANCING:PRI PRODUCTS:INTERMEDIATES FOR DNA SYNTH EMPLOYEES: 8
95	CHEMICAL DYNAMICS CORP. P.O. BOX 395 S. PLAINFIELD NJ 07080 PHONE:2017535000	PRES: YEAR:1972 CODE:G R&D DIR:EDWIN LUNDELL,PH.D. FINANCING:PRI PRODUCTS:DNA TECHNOL REAGENTS, RE'S, ETC. EMPLOYEES:
96	CHEMICON INTERNATIONAL, INC 100 LOMITA STREET EL SEGUNDO CA 90245 PHONE:2133222451	PRES: YEAR:1981 CODE:G R&D DIR: FINANCING:PRI PRODUCTS:MABS; GRWTH FCTRS;MTT KIT EMPLOYEES: 8
97	CHIMERIX PO BOX 976 GLASTONBURY CT 06033 PHONE:2036339515	PRES:SALVADOR N FERNANDEZ YEAR:1983 CODE:K R&D DIR: FINANCING:PRI PRODUCTS:CLINICAL TESTING PRODS RESEARCH EMPLOYEES: 9
98	CHIRON CORPORATION 4560 HORTON ST EMERYVILLE CA 94608 PHONE:4154762624	PRES:DR. EDWARD PENHOET YEAR:1981 CODE:P R&D DIR:PABLO VALENZUELA FINANCING:PUB PRODUCTS:DIAGN FOR AIDS;DNA PROBE DIAGN;WOUND HEA EMPLOYEES: 220
99	CISTRON BIOTECHNOLOGY, INC. 10 BLOOMFIELD AVE,BX 2004 PINE BROOK NJ 07058 PHONE:2015751700	PRES:WALTER O. FREDERICKS YEAR:1984 CODE:P R&D DIR:ROBERTA C. REUBEN FINANCING:PUB PRODUCTS:IL-1, 1L-2 EMPLOYEES: 30

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| 100 CLINICAL BIOTECHNOLOGIES, INC. | PRES:ROBERT L. STOUT | YEAR:1986 CODE:M |
| 11844 WEST 85TH ST | R&D DIR: | FINANCING:PRI |
| LENEXA KS 66214 | PRODUCTS:ENZYMES FOR FOOD PRODS,DAIRY,BREWING | |
| PHONE:913492 | EMPLOYEES: 22 | |
|
 | | |
| 101 CLINICAL SCIENCES, INC. | PRES:MR. MOSHE SHURIN | YEAR:1971 CODE:G |
| 30 TROY ROAD | R&D DIR:HELLEN C. GREENBLATT | FINANCING:PUB |
| WHIPPANY NJ 07981 | PRODUCTS:BIOCHEMICALS FOR DIAGNOS AND VET USES | |
| PHONE:2013860030 | EMPLOYEES: 50 | |
|
 | | |
| 102 CLONTECH LABORATORIES, INC. | PRES:KENNETH FONG, PH.D. | YEAR:1984 CODE:G |
| 4055 FABIAN WAY | R&D DIR: | FINANCING:PUB |
| PALO ALTO CA 94303 | PRODUCTS:CDNA LIBRARIES, REAGENTS, ETC | |
| PHONE:4154248188 | EMPLOYEES: 18 | |
|
 | | |
| 103 CODON | PRES:FRED CRAVES, PH.D. | YEAR:1980 CODE:V |
| 430 VALLEY DRIVE | R&D DIR:JOEL HEDGPETH, PH.D. | FINANCING:PRI |
| BRISBANE CA 94005 | PRODUCTS:VET VACCINES, HUMAN DIAGNOST, | |
| PHONE:4154686300 | EMPLOYEES: 64 | |
|
 | | |
| 104 COLLABORATIVE RESEARCH INC. | PRES:JOHN E. DONALDS | YEAR:1961 CODE:G |
| 2 OAK PARK | R&D DIR:THOMAS O. OESTERLING | FINANCING:PUB |
| BEDFORD MA 01730 | PRODUCTS:RESEARCH REAGENTS, PEPTIDES | |
| PHONE:6172750004 | EMPLOYEES: 160 | |
|
 | | |
| 105 COLLAGEN CORPORATION | PRES:H. PALEFSKY | YEAR:1975 CODE:S |
| 2500 FABER PLACE | R&D DIR:BRUCE PHARRIS | FINANCING:PUB |
| PALO ALTO CA 94303 | PRODUCTS:MEDICAL DEVICES;COLLAGEN IMPLANT;TISS CU | |
| PHONE:4158560200 | EMPLOYEES: 225 | |
|
 | | |
| 106 CONSOLIDATED BIOTECHNOLOGY, INC | PRES:DR. J. JOHN MARSHALL | YEAR:1983 CODE:G |
| 1413 WEST INDIANA AVE | R&D DIR:SAME | FINANCING:PRI |
| ELKHART IN 46515 | PRODUCTS:ENZYMES, SOME FOOD RELATED RESEARCH | |
| PHONE:2192956767 | EMPLOYEES: | |
|
 | | |
| 107 COOPER DEVELOPMENT CO. | PRES:MR. JOHN L. EDWARDS | YEAR:1980 CODE:P |
| 3145 PORTER DR. | R&D DIR:KENNETH D. NOONAN | FINANCING:SUB |
| PALO ALTO CA 94304 | PRODUCTS:ALPHA1 ANTITRYPSIN, DRUGS, MABS, ETC | |
| PHONE:2152512000 | EMPLOYEES: | |
|
 | | |
| 108 COORS BIOTECH PRODUCTS CO. | PRES:NORMAN O. JANGAARD | YEAR:1984 CODE:M |
| MAIL # CC150 | R&D DIR:E.W. FOSTER, PH.D. | FINANCING:SUB |
| GOLDEN CO 80401 | PRODUCTS:INDUS DEGREASER; FOOD PRODS; SPECIA CHEM | |
| PHONE:3032773761 | EMPLOYEES: 185 | |

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109 CORNING BIOMEDICAL RESEARCH 1 KENDALL SQUARE, BLDG 200 CAMBRIDGE MA 02139 PHONE:6172539602	PRES: R&D DIR: PRODUCTS:HIGH FRUCTOSE CORN SYRUP, FOODS EMPLOYEES:	YEAR:1984 CODE:M FINANCING:SUB
110 COVALENT TECHNOLOGY CORP. P.O. BOX 1868 ANN ARBOR MI 48106 PHONE:3137695377	PRES:ALEXANDER GLASS,PH.D R&D DIR:MICHAEL PAPPAS,PH.D. PRODUCTS:RAPID DIAGN ASSAY FOR STDs EMPLOYEES: 16	YEAR:1981 CODE:K FINANCING:SUB
111 CREATIVE BIOMOLECULES 35 SOUTH STREET HOPKINTON MA 01748 PHONE:6174359741	PRES:CHARLES COHEN,PH.D. R&D DIR:ROBERTO CREA,PH.D. PRODUCTS:PEPTIDES, CONTRACT R AND D, TPA, EGF, &C EMPLOYEES: 40	YEAR:1981 CODE:W FINANCING:PRI
112 CROP GENETICS INTERNATIONAL,NVP 7170 STANDARD DRIVE HANOVER MD 21076 PHONE:3016212900	PRES:ROBERT L. MONTGOMERY R&D DIR:PETER S. CARLSON,PHD PRODUCTS:DISEASE FREE SUGARCANE SEED EMPLOYEES: 49	YEAR:1981 CODE:B FINANCING:PRI
113 CYANOTECH CORPORATION 18748 142ND AVE., N.E. WOODINVILLE, WA 98072 PHONE:2064812173	PRES:ARTHUR KARUNA-KARAN R&D DIR:GERALD CYSEWSKI,PH.D PRODUCTS:PHYCOBILIPROTEIN;SPIRULINA;B-CAROTENE;.. EMPLOYEES: 23	YEAR:1983 CODE:M FINANCING:PRI
114 CYGNUS RESEARCH CORP. 701 GALVESTON DR REDWOOD CA 94063 PHONE:4153694300	PRES:DAVID DEWEESE R&D DIR: PRODUCTS:DRUG DELIV'Y SYST;CONTRACTS TO PHARM COS EMPLOYEES: 15	YEAR:1985 CODE:S FINANCING:PRI
115 CYTOGEN CORP 201 COLLEGE RD., E PRINCETON NJ 08540 PHONE:6099878200	PRES:DR. RONALD J BRENNER R&D DIR:DR THOMAS J MCKEARN PRODUCTS:THERAPEUTIC MABS AND DIAGNOST. EMPLOYEES: 60	YEAR:1980 CODE:K FINANCING:PUB
116 CYTOTECH, INC 11045 ROSELLE ST SAN DIEGO CA 92121 PHONE:6194521556	PRES:MR. PAUL ROSINACK R&D DIR:JOHN TAMERIUS PRODUCTS:AIDS DIAGNOSTICS, REAGENTS EMPLOYEES: 20	YEAR:1982 CODE:K FINANCING:PRI
117 CYTOX CORPORATION 954 MARCON BLVD ALLENTOWN PA 18103 PHONE:2152648740	PRES:JOHN N ZIKOPOULOS R&D DIR:CURTIS S MCDOWELL PRODUCTS:WASTE, AG, POLLUTION, ENERGY EMPLOYEES: 22	YEAR:1975 CODE:R FINANCING:PUB

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118 DAKO CORP 22 NORTH MILFAS ST SANTA BARBARA CA 93103 PHONE:8002355743	PRES:MR VIGGO F. HARBEE R&D DIR: PRODUCTS:POLY AND MONO AB'S, CLIN TEST KITS, PROTS EMPLOYEES:	YEAR:1979 CODE:X FINANCING:SUB
119 DAMON BIOTECH INC. 119 FOURTH AVE. NEEDHAM HTS. MA 02194 PHONE:6174490800	PRES:ROBERT SCHNEIDER R&D DIR:DR. WILLIAM TERRY PRODUCTS:MABS, DRUG DELIV PRODS, CELL ENCAPSUL.SYS EMPLOYEES: 126	YEAR:1978 CODE:P FINANCING:SUB
120 DEKALB-PFIZER GENETICS 3100 SYCAMORE RD. DEKALB IL 60115 PHONE:8157563671	PRES:DR. KENT SCHULTZ R&D DIR:C. KRULL & F. TROYER PRODUCTS:HYBRID SEEDS, CORN, SOY, ETC. EMPLOYEES: 235	YEAR:1982 CODE:B FINANCING:PRI
121 DELTOWN CHEMURGIC CORP. 191 MASON ST GREENWICH CT 06830 PHONE:2036298754	PRES:DR JACK L HERZ R&D DIR:TIMOTHY CALLAHAN PRODUCTS:PEPTONES AND HYDROLASES FOR PHARMA, CHEM EMPLOYEES: 90	YEAR:1968 CODE:J FINANCING:PRI
122 DIAGNON CORP. 11 TAFT CT. ROCKVILLE MD 20850 PHONE:3012520633	PRES:WILLIAM C. GORDON R&D DIR: PRODUCTS:ASSAYS-FERRITIN, B12/FOLATE, HERPES, VIR TR EMPLOYEES: 70	YEAR:1981 CODE:A FINANCING:PUB
123 DIAGNOSTIC PRODUCTS, CORP. 5700 W 96 ST LOS ANGELES CA 90045 PHONE:2137760180	PRES:SAME R&D DIR:SAID EL SHAMI PRODUCTS:DIAGNOSTIC KITS EMPLOYEES: 270	YEAR:1972 CODE:G FINANCING:PUB
124 DIAGNOSTIC TECHNOLOGY, INC. 240 VANDRBILT MOTOR PKWY. HAUPPAUGE NY 11788 PHONE:5165824949	PRES:DR.IMRE PINTER R&D DIR:DR JERRY PICKERING PRODUCTS:DIAGNOSTICS, BLOOD TEST KITS, REAGENTS EMPLOYEES: 60	YEAR:1980 CODE:K FINANCING:PRI
125 DIAMEDIX, INC. 2140 NORTH MAIMI AVE MIAMI FL 33127 PHONE:3053242329	PRES:DR JOE GIEGEL R&D DIR: PRODUCTS:DIAGN KITS FOR INFECT & AUTO IMMUN DIS EMPLOYEES: 30	YEAR:1986 CODE:K FINANCING:PRI
126 DNA PLANT TECHNOLOGY CORP. 2611 BRANCH PIKE CINNAMINSON NJ 08077 PHONE:6098290110	PRES:RICHARD LASTER R&D DIR:WILLIAM R. SHARP PRODUCTS:FOODS AND PLANTS, AGRICULTURAL PRODS EMPLOYEES: 80	YEAR:1981 CODE:B FINANCING:PUB

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127 DNAX 901 CALIFORNIA AV PALO ALTO CA 94304 PHONE:4158529196	PRES:SAME R&D DIR: PRODUCTS:RESEARCH SUB OF SP; NO PRODUCTION AT ALL EMPLOYEES: 81	YEAR:1980 CODE:P FINANCING:PUB
128 E-Y LABORATORIES, INC 107 N. AMPHLETT BLVD. SAN MATEO CA 94401 PHONE:8008210044	PRES:DR ALBERT E. CHU R&D DIR:PETER CHUN PRODUCTS:ANTISERA;CARB RECOGN FACTR;REAGENT;DIAGN EMPLOYEES: 20	YEAR:1978 CODE:S FINANCING:PRI
129 ELECTRO-NUCLEONICS, INC. 350 PASSAIC AV FAIRFIELD NJ 07006 PHONE:2012276700	PRES:MR. HERBERT APPLETON R&D DIR:DR ALAN FISHMAN PRODUCTS:INTERLEUKIN-2;HTLV-III ANTIBODY TEST EMPLOYEES: 720	YEAR:1960 CODE:K FINANCING:PUB
130 EMBREX, INC. 401 OBERLIN RD RALEIGH NC 27605 PHONE:9198210555	PRES:MR. ALAN HEROSIAN R&D DIR:DR. J. P. THAXTON PRODUCTS:BIOLOGICALS FOR IN-OVO APPL IN POULTRY EMPLOYEES: 17	YEAR:1985 CODE:A FINANCING:PRI
131 EMTECH RESEARCH 15 W PARK DR MOUNT LAUREL NJ 08054 PHONE:6098662900	PRES:JAMES BUTLER, SR. R&D DIR:HOWARD WORNE PRODUCTS:BIOTECH R&D FOR COSMETICS AND AGRICULTUR EMPLOYEES: 30	YEAR:1983 CODE:B FINANCING:PRI
132 ENDOTRONICS, INC. 8500 EVERGREEN BLVD. COON RAPIDS MN 55433 PHONE:6127860302	PRES: R&D DIR: PRODUCTS:APS SERIES;ACUSYST-P;VACCINES; BIOLOGICA EMPLOYEES: 155	YEAR:1981 CODE:F FINANCING:PUB
133 ENGENICS, INC. 3760 HAVEN AVE. MENLO PARK CA 94025 PHONE:4153248600	PRES:DR JOHN L RICHARDSON R&D DIR:S.E. SHUMATE, II PRODUCTS:STRAIN PROD'N, SEPARATIONS, PROT.PURIF EMPLOYEES: 30	YEAR:1981 CODE:O FINANCING:PRI
134 ENVIRONMENTAL DIAGNOSTICS, INC PO BOX 908; 2990 ANTHONY RD BURLINGTON NC 27215 PHONE:9192266311	PRES:ARDEN A KELTON R&D DIR: PRODUCTS:ENVIRON AND TOXIN TESTING EMPLOYEES: 55	YEAR:1983 CODE:Y FINANCING:PUB
135 ENZO BIOCHEM, INC. 325 HUDSON ST. NEW YORK NY 10013 PHONE:2127413838	PRES:ELAZAR RABBANI R&D DIR:DEAN ENGELHARDT PRODUCTS:ENZYMES;LETINS;FILTERS;NUCLEOTIDES;ETC EMPLOYEES: 110	YEAR:1976 CODE:K FINANCING:PUB

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136 ENZON 518 LOGUE AV MOUNTAIN VIEW CA 94043 PHONE:4159647676	PRES:MR HENRY LERMAN R&D DIR:MARK SAIFER PRODUCTS:SOD FOR HUMAN AND VET USE EMPLOYEES: 22	YEAR:1965 CODE:P FINANCING:PUB
137 ENZON, INC. 300-C CORPORATE CT. S. PLAINFIELD NJ 07080 PHONE:2016681800	PRES:ABRAHAM ABUCHOWSKI R&D DIR:RICHARD STONE PRODUCTS:HUMAN THERAPEUTICS;ENZYMES EMPLOYEES: 31	YEAR:1981 CODE:P FINANCING:PUB
138 ENZYME CENTER INC., THE 36 FRANKLIN ST. MALDEN MA 02148 PHONE:6173224885	PRES:STANLEY CHARON R&D DIR: PRODUCTS:LG SCALE FERMENT;SEPAR & PURIF OF ENZYME EMPLOYEES: 30	YEAR:1978 CODE:O FINANCING:PRI
139 ENZYME TECHNOLOGY CORP. 783 US 250 E., RTE.2 ASHLAND OH 44805 PHONE:4192893706	PRES:MR LEWIS LEONARD R&D DIR:HAL R. TURNER, PH.D. PRODUCTS:GLOCOAMYLASE ENZYME; A-AMYLASE ENZYME EMPLOYEES: 26	YEAR:1981 CODE:O FINANCING:SUB
140 EPITOPE, INC. 15425-E SOUTHWEST KOLL PKWY BEAVERTON OR 97006 PHONE:5036416115	PRES:MICHAEL C. HUBBARD R&D DIR:ANDREW GOLDSTEIN PRODUCTS:RED CELL & HLA MCS; VIRAL DETEC'N KITS EMPLOYEES: 21	YEAR:1979 CODE:G FINANCING:PUB
141 EXOVIR, INC. 111 GREAT NECK RD. SU 607 GREAT NECK NY 11021 PHONE:5164662110	PRES:DR RICHARD D. GLASER R&D DIR: PRODUCTS:TOPICAL FOR HSV-II EMPLOYEES: 5	YEAR:1981 CODE:P FINANCING:PUB
142 FERMENTEC CORP 101 FIRST ST SUITE 490 LOS ALTOS CA 94022 PHONE:4159654030	PRES:JOHN C. WALKER R&D DIR:DAVID DONOFRIO PRODUCTS:WHEY CONVERSION PLANT AND FERMENTATION EMPLOYEES: 30	YEAR:1981 CODE:O FINANCING:PRI
143 FLOW LABORATORIES, INC. 7655 OLD SPRING HOUSE RD. MCLEAN VA 22102 PHONE:7038935925	PRES:HARLAN E. DEN BESTE R&D DIR:PEGGY LEVER-FISCHER PRODUCTS:MEDIA, FERMENT EQUIP, REAGENTS EMPLOYEES:	YEAR:1961 CODE:G FINANCING:SUB
144 GAMETRICS, LTD. COLONY (WYOMING) ROUTE ALZADA MT 59311 PHONE:3078784494	PRES:DR RONALD J ERICSSON R&D DIR: PRODUCTS:HUMAN CHILD SEX SELECT, ISOLAT X/Y SPERM EMPLOYEES:	YEAR:1974 CODE:K FINANCING:PRI

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145 GAMMA BIOLOGICALS, INC. 3700 MANGUM RD. HOUSTON TX 77092 PHONE:8002315655	PRES:DAVID E. HATCHER R&D DIR: PRODUCTS:REAGENT-BASED DX TESTS FOR HUMAN BL SERA EMPLOYEES: 166	YEAR:1969 CODE:K FINANCING:PUB
146 GEN-PROBE, INC. 9880 CAMPUS POINT DR SAN DIEGO CA 92121 PHONE:6192688400	PRES:JOHN L. BISHOP R&D DIR:DR.DAVID E. KOHNE PRODUCTS:DNA PROBE TECH FOR RESEARCH & CLINICAL EMPLOYEES: 113	YEAR:1984 CODE:K FINANCING:PRI
147 GENENCOR, INC. 180 KIMBALL WAY S.SAN FRANCISCO CA 94080 PHONE:4157427500	PRES:ROBERT E. LEACH R&D DIR:DR. HERBERT HEYNEKER PRODUCTS:FOOD PROCESS AND CHEMICAL ENZYMES EMPLOYEES: 100	YEAR:1982 CODE:J FINANCING:PRI
148 GENENTECH 460 POINT SAN BRUNO BLVD S. SAN FRAN. CA 94080 PHONE:4152661614	PRES:G. KIRK RAAB R&D DIR:DR DAVID W MARTIN JR PRODUCTS:INSULIN, HGH, TPA, HSA, IF, ENZYMES EMPLOYEES: 950	YEAR:1976 CODE:P FINANCING:PUB
149 GENESIS LABS, INC. 5182 WEST 76TH ST MINNEAPOLIS MN 55435 PHONE:6128353446	PRES: R&D DIR:ALAN R. DAY PRODUCTS:BLOOD GLUCOSE TEST; THERAP DRUG MONITOR EMPLOYEES: 29	YEAR:1984 CODE:K FINANCING:PRI
150 GENETIC DIAGNOSTICS CORP. 160 COMMUNITY DR. GREAT NECK NY 11021 PHONE:5164874711	PRES:DR HERBERT A. PLATT R&D DIR:DR HARVEY BRANDWEIN PRODUCTS:DIAGNOSTIC TEST KITS EMPLOYEES: 17	YEAR:1981 CODE:K FINANCING:PUB
151 GENETIC ENGINEERING, INC. 136 AV & N. WASHINGTON ST PO33554,DENVER CO 80233 PHONE:3034571311	PRES:CHARLES SREBNIK R&D DIR: PRODUCTS:ANIMAL SEX SELECTION, BULL SEMEN LABS EMPLOYEES: 23	YEAR:1980 CODE:V FINANCING:PUB
152 GENETIC SYSTEMS CORP. 3005 FIRST AV SEATTLE WA 98121 PHONE:2067284900	PRES:SAME R&D DIR:JOHN HANSEN PRODUCTS:MAB BASED HUMAN DIAGNOST AND THERAPEUT EMPLOYEES: 400	YEAR:1980 CODE:K FINANCING:SUB
153 GENETICS INSTITUTE, INC. 87 CAMBRIDGE PARK DR. CAMBRIDGE MA 02140 PHONE:6178761170	PRES:MR GABRIEL SCHMERGEL R&D DIR:DR ROBERT KAMEN PRODUCTS:GM-CSF;EPO;TPA; GENE SPLICE PRODS EMPLOYEES: 288	YEAR:1981 CODE:P FINANCING:PUB

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154 GENEX INC. 16020 INDUSTRIAL DR. GAITHERSBURG MD 20877 PHONE:3012580552	PRES:SAME R&D DIR: PRODUCTS:COMMOD AND SPEC. CHEMICALS;DRAIN CLEANER EMPLOYEES:	YEAR:1977 CODE:I FINANCING:PUB
155 GENTRONIX, INC. 12150 TECH RD SILVER SPRING MD 20904 PHONE:3012940400	PRES:SAME R&D DIR: PRODUCTS:BIOCHIPS, BIOELECTRONICS EMPLOYEES: 6	YEAR:1972 CODE:D FINANCING:PRI
156 GENZYME CORP. 75 KNEELAND ST. BOSTON MA 02111 PHONE:8003321042	PRES:HENRI TERMEER R&D DIR:HENRY BLAIR PRODUCTS:BIOLOGICALS FOR HUMAN HEALTH CARE;DIAGN EMPLOYEES: 185	YEAR:1981 CODE:P FINANCING:PUB
157 GLEN MILLS, INC. 203 BROOKDALE ST. MAYWOOD NJ 07607 PHONE:2018454665	PRES:PETER KENDALL R&D DIR:STANLEY I GOLDBERG PRODUCTS:OEM;CELL LYSING EQUIP; GLASS BEADS. EMPLOYEES: 11	YEAR:1980 CODE:S FINANCING:PRI
158 GRANADA GENETICS CORP. 10900 RICHMOND AVE PO42298HOUSTON TX 77242 PHONE:7137831310	PRES:DAVID ELLER R&D DIR:DR JOSEPH MASSEY PRODUCTS:BULL GENETICS, SHRIMP, FOOD EMPLOYEES: 3	YEAR:1979 CODE:A FINANCING:SUB
159 HANA BIOLOGICS, INC. 8050 MARINA VILLAGE PKWY ALMEDA CA 94501 PHONE:8007724262	PRES:MR. CRAIG MCMULLEN R&D DIR:DR.FRED VOSS PRODUCTS:CELL IMPLANTS TO TREAT DISEASE EMPLOYEES: 82	YEAR:1979 CODE:P FINANCING:PUB
160 HAWAII BIOTECHNOLOGY GROUP, INC 99-193 AIEA HEIGHTS DR. AIEA HI 96701 PHONE:8084875565	PRES:STEVEN K. BRAUER R&D DIR:DR. TOM HUMPHREYS PRODUCTS:IMMUNOTOXINS, PESTICIDE DETECTION KIT EMPLOYEES: 10	YEAR:1982 CODE:B FINANCING:PRI
161 HAZLETON BIOTECHNOLOGIES GRP 9200 LEESBURG TURNPIKE VIENNA VA 22180 PHONE:7038935400	PRES:MR.LEWIS E.S.PARKER R&D DIR:DR. C. BRADLEY HAGER PRODUCTS:LAB REAGENTS AND EQUIPMENT, MEDI, MABS EMPLOYEES: 500	YEAR:1981 CODE:G FINANCING:SUB
162 HOUSTON BIOTECH 3606 RESEARCH FOREST DR THE WOODLANDS TX 77380 PHONE:7133630999	PRES:ALFRED SCHEID R&D DIR: PRODUCTS:OPHTHAMOLOGY AND NEUROLOGY PRODUCTS EMPLOYEES:	YEAR:1984 CODE:P FINANCING:PRI

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163 HP GENENCHEM 460 POINT SAN BRUNO BLVD. S.SAN FRANCISC CA 94080 PHONE:4158727057	PRES:CHARLES G. WALKER R&D DIR: PRODUCTS:LAB INSTRUM EMPLOYEES:	YEAR:1983 CODE:F FINANCING:PRI
164 HYBRITECH, INC. 11095 TORREYANA RD. SAN DIEGO CA 92121 PHONE:6194556700	PRES:DAVID F. HALE R&D DIR:DR DAVID KABAKOFF PRODUCTS:IMMUNOASSAYS;R&D MABS; EMPLOYEES:	YEAR:1978 CODE:X FINANCING:SUB
165 HYCLONE LABORATORIES 1725 S.STATE HIGHWAY 8991 LOGAN UT 84321 PHONE:8017534584	PRES:DR REX S. SPENDLOVE R&D DIR: PRODUCTS:IMMUNOCHEM;ANIMAL SERA;HYDBRIDOMAS;ETC. EMPLOYEES: 107	YEAR:1975 CODE:H FINANCING:PRI
166 HYGIEIA SCIENCES 330 NEVADA ST. NEWTON MA 02160 PHONE:6719640200	PRES:DR ELLIOT BLOCK R&D DIR:L. EDWARD CANNON PRODUCTS:OVULATION PREDICTOR; PREGNANCY TEST KITS EMPLOYEES: 70	YEAR:1980 CODE:K FINANCING:PUB
167 IDEC, INC. 11211 SORRENTO VALLEY RD.STE SAN DIEGO CA 92121 PHONE:6194580600	PRES:DR. WM.RASTETTER HR&D DIR:DR RICHARD MILLER PRODUCTS: EMPLOYEES:	YEAR: CODE:P FINANCING:PRI
168 IDETEK, INC. 1057 SNEATH LANE SAN BRUNO CA 94066 PHONE:4159522844	PRES: R&D DIR: PRODUCTS:DX TEST KITS FOR FOOD & AGRICULTURE EMPLOYEES: 14	YEAR:1983 CODE:M FINANCING:PRI
169 IGEN 1530 E JEFFERSON ST ROCKVILLE MD 20852 PHONE:3019847964	PRES:SAM WOHLSTADER R&D DIR: PRODUCTS:CONT. RESEARCH; MABS FOR HUMAN PATHOGENS EMPLOYEES:	YEAR:1982 CODE:W FINANCING:PRI
170 IGENE BIOTECHNOLOGY INC. 9110 RED BRANCH RD. COLUMBIA MD 21045 PHONE:3019972599	PRES:DR ROBERT A. MILCH R&D DIR:THOMAS D. MAYS PRODUCTS:TM-MINRALAC;MACROMIN;WEYCO-SERV;ETC. EMPLOYEES: 30	YEAR:1981 CODE:M FINANCING:PUB
171 IMMUCELL CORPORATION 966 RIVERSIDE ST. PORTLAND ME 04103 PHONE:2077978386	PRES:FREDERICK J. FOLEY R&D DIR:FRANK E. RUCH, JR PRODUCTS:2 HUMAN DX;REAGENTS;3 ANIMAL DX;1 VACCIN EMPLOYEES: 17	YEAR:1982 CODE:A FINANCING:PRI

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172 IMMUNETECH PHARMACEUTICALS 11045 ROSELLE ST, SAN DIEGO CA 92121 PHONE:6194572553	PRES:MR.GORDON RAMSEIER R&D DIR:DR GARY S HAHN PRODUCTS:IMMUN ACTIVE PEPTIDES AS THERAPEUTICS EMPLOYEES: 45	YEAR:1981 CODE:X FINANCING:PRI
173 IMMUNEX CORP. 51 UNIVERSITY ST. SEATTLE WA 98101 PHONE:2065870430	PRES:STEPHEN A. DUZAN R&D DIR:DR STEVEN GILLIS PRODUCTS:IL-2; GM-CSF; IL-1; IL-1BETA;LYMPHOKINES EMPLOYEES: 153	YEAR:1981 CODE:P FINANCING:PUB
174 IMMUNO MODULATORS LABS. INC 10521 CORPORATE DRIVE STAFFORD TX 77477 PHONE:7132409595	PRES:MR.OLIVER BRIGHT, JR R&D DIR:DR JERZY GEORGIADES PRODUCTS:INTERFERONS;AIDS TH;COSMETICS;HCG;ETC. EMPLOYEES: 25	YEAR:1981 CODE:P FINANCING:PRI
175 IMMUNOGEN, INC. .124 MOUNT AUBURN ST, STE 200 CAMBRIDGE MA 02138 PHONE:6173380800	PRES:DR MITCHEL SAYARE R&D DIR: PRODUCTS:DEV & MRKT CONJUGATED ABS FOR TU & DX EMPLOYEES: 11	YEAR:1981 CODE:W FINANCING:PRI
176 IMMUNOMED 5910-G BRECKENRIDGE PKWY. TAMPA FL 33610 PHONE:8136219447	PRES:DR KENT R VAN KAMPEN R&D DIR:WILLIAM COX PRODUCTS:IMMUNOTHERAPEUTICS EMPLOYEES: 17	YEAR:1979 CODE:Q FINANCING:PRI
177 IMMUNOMEDICS, INC. 5 BRUCE ST NEWARK NJ 07103 PHONE:2014564779	PRES:DR.GEORGE MASTERS R&D DIR:DR. HANS HANSEN PRODUCTS:AUTOIMM DIS ASSAY;ALLERGY PRODS;TUMOR MK EMPLOYEES: 55	YEAR:1983 CODE:P FINANCING:PUB
178 IMMUNOTECH CORP. PO BOX 860 BOSTON MA 02134 PHONE:6177871010	PRES:FRANCIS CAPITANIO R&D DIR:JOHN CARTER PRODUCTS:IMMUNODAGNOSTIC TEST KITS EMPLOYEES: 15	YEAR:1980 CODE:K FINANCING:PRI
179 IMRE CORP 130 FIFTH AVE. NORTH SEATTLE WA 98109 PHONE:2064481000	PRES:" R&D DIR:JOHN SJOQUIST PRODUCTS:R & D FOR BLOOD PURIFIERS AND PROTEIN A EMPLOYEES: 23	YEAR:1981 CODE:W FINANCING:PUB
180 IMREG, INC. 144 ELK PL., SUITE 1400 NEW ORLEANS LA 70112 PHONE:5045232875	PRES:DR A ARTHUR GOTTLIEB R&D DIR: PRODUCTS:IMMUNOREGULATORS EMPLOYEES: 31	YEAR:1981 CODE:X FINANCING:PUB

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181 IN VITRO INTERNATIONAL, INC. 611P HAMMONDS FERRY RD LINTHICUM MD 21090 PHONE:8004684876	PRES:DR. REX D'AGOSTINO R&D DIR: PRODUCTS:TYPE CULTURE DEPOSITORY EMPLOYEES:	YEAR:1982 CODE:H FINANCING:PRI
182 INCELL CORPORATION 1600 WEST CORNELL MILWAUKEE WI 53209 PHONE:4142634111	PRES:DR. PETER BAYNE R&D DIR: PRODUCTS:PEPTIDE HORMONES;RES-YEAST & FUNGAL GENE EMPLOYEES: 23	YEAR:1981 CODE:J FINANCING:PRI
183 INFERGENE COMPANY 433 INDUSTRIAL WAY BENICIA CA 94510 PHONE:7077466804	PRES:DR BERNIE DIDARIO R&D DIR:DR WILLIAM SIKKEMA PRODUCTS:BAKING & BREWING STRAINS;GLUOAMALYSE STR EMPLOYEES: 25	YEAR:1983 CODE:S FINANCING:PUB
184 INGENE, INC. 1545 17TH ST SANTA MONICA CA 90404 PHONE:2138297681	PRES:DR GARY WILCOX R&D DIR: PRODUCTS:BONE & CARTL HEAL;CA THER;SWEETENERS EMPLOYEES: 65	YEAR:1980 CODE:P FINANCING:PUB
185 INTEGRATED CHEMICAL SENSORS 44 MECHANIC ST NEWTON MA 02164 PHONE:6179656950	PRES:CARL M. GOOD R&D DIR:GLEN BAASTIANS PRODUCTS:INSTRUMENTS AND BIOSENSORS EMPLOYEES: 8	YEAR:1984 CODE:D FINANCING:PRI
186 INTEGRATED GENETICS, INC. 31 NEW YORK AVE. FRAMINGHAM MA 01701 PHONE:6178751336	PRES:ROBERT J. CARPENTER R&D DIR:ALAN E. SMITH PRODUCTS:DX DNA PROBES-SALMONELLA, GENETIC DIS EMPLOYEES: 200	YEAR:1981 CODE:P FINANCING:PUB
187 INTEK DIAGNOSTICS, INC. 1450 ROLLINS RD. BURLINGAME CA 94010 PHONE:4153400530	PRES:DR. ROBT SWIFT R&D DIR: PRODUCTS:T CELL CLONES, ANTIGENS, FLOW CYTOMETRY EMPLOYEES: 33	YEAR:1983 CODE:X FINANCING:PRI
188 INTELLI-GENETICS 700 EAST EL CAMINO MOUNTAIN VIEW CA 94040 PHONE:4159627313	PRES:MICHAEL KELLY R&D DIR: PRODUCTS:GENETIC ENGIN SOFTWARE;STRATEGENE EMPLOYEES: 49	YEAR:1980 CODE:S FINANCING:PRI
189 INTER-AMERICAN RESEARCH ASC. 1160 TAFT ST ROCKVILLE MD 20850 PHONE:3012949442	PRES:TOM KELLY R&D DIR: PRODUCTS:PURIFIED ANTIGENS, ANTISERA, BLOOD PRODS EMPLOYEES: 44	YEAR:1979 CODE:G FINANCING:PRI

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- 190 INTER-CELL TECHNOLOGIES, INC. PRES:DENNIS DELLA PENTA YEAR:1982 CODE:S
422 ROUTE 206, SUITE 143 R&D DIR:MARGARET CIPUZAK FINANCING:PRI
SOMERVILLE NJ 08876 PRODUCTS:BIOLOGICALS;IMMUN'REAGENTS;LYMPHOKINES
PHONE:2013598228 EMPLOYEES: 9
- 191 INTERFERON SCIENCES, INC. PRES:DR SAMUEL RONEL YEAR:1981 CODE:P
783 JERSEY AVE. R&D DIR:DR DOUGLAS TESTA FINANCING:PRI
NEW BRUNSWICK NJ 08901 PRODUCTS:INTERFERON
PHONE:2012493250 EMPLOYEES: 70
- 192 INTERLEUKIN-2 PRES:MAXIMILLIAN DE CLARA YEAR:1983 CODE:P
413 N. WASHINGTON ST. R&D DIR: FINANCING:PUB
ALEXANDRIA VA 22313 PRODUCTS:LYMPHOKINES;AIDS VACCINE;INTERLEUKIN 1,2
PHONE:7035495293 EMPLOYEES:
- 193 INTERN'TL ENZYMES, INC. PRES:GRANGER HAUGH YEAR:1974 CODE:G
1667 S. MISSION RD. R&D DIR:JEFF OFFICE FINANCING:PRI
FALLBROOK CA 92028 PRODUCTS:SERUM FREE MEDIA SUPPL;ENZYMES;ANTISERA
PHONE:6197285205 EMPLOYEES: 4
- 194 INTERN'TL MINERAL & CHEMICAL PRES: YEAR:1970 CODE:A
2315 SAUNDERS RD R&D DIR:M.B. INGLE FINANCING:PUB
NORTHBROOK IL 60062 PRODUCTS:ANIMAL GROWTH, HEALTH AND, NUTRITION
PHONE:3125648600 EMPLOYEES:
- 195 INTERN'TL PLANT RESEARCH INST. PRES:DR RAYMOND J. MOSHY YEAR:1978 CODE:B
830 BRANSTEN RD. R&D DIR: FINANCING:PRI
SAN CARLOS CA 94070 PRODUCTS:DATE PALMS;GEN ENG REAGENTS;OIL PALMS;ET
PHONE:4155955335 EMPLOYEES: 50
- 196 INTRA GENE INTERNATIONAL INC. PRES:MR. PETER F. CASELLA YEAR:1981 CODE:S
987 ELLIOTT DR R&D DIR: FINANCING:PRI
LEWISTON NY 14092 PRODUCTS:TECHNOLOGY EXHCANGE;LICENSING
PHONE:7162973658 EMPLOYEES: 12
- 197 INVITRON CORP. PRES:DR CHARLES V. BENTON YEAR:1984 CODE:P
8000 MARYLAND AVE.,SU 860 R&D DIR:DR. CHRIS SIMONSEN FINANCING:PRI
CLAYTON MO 63105 PRODUCTS:CONTRACT MANUF OF CELL PRODS-HUMAN TU,DX
PHONE:3147278255 EMPLOYEES: 200
- 198 JACKSON IMMUNOREASEARCH LAB PRES:DR. WM J. STEGEMAN YEAR:1982 CODE:G
872 BALTIMORE PIKE R&D DIR:CYNARA Y. KO FINANCING:PRI
WEST GROVE PA 19390 PRODUCTS:AFFIN PURIF PROTEINS; PURE PROTEINS
PHONE:8003675296 EMPLOYEES: 16

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- | | | |
|--|---|-----------------------------------|
| 199 KALLESTAD LABORATORIES
1120 CAPITAL OF TEXAS HWY, SO.
AUSTIN TX 78746
PHONE:5123295555 | PRES:MR DAVID MCWILLIAMS
R&D DIR:DENNIS MURRAY
PRODUCTS:DIAGNOSTIC PRODUCTS
EMPLOYEES: 330 | YEAR:1967 CODE:K
FINANCING:PRI |
| 200 KARYON TECHNOLOGY, LTD.
333 PROVIDENCE HWY.
NORWOOD MA 02062
PHONE:6177696970 | PRES:V.M. ESPOSITO
R&D DIR:DR ROBERT J. BUEHLER
PRODUCTS:TISSUE PROCESS CULTURE TECHNOLOGY
EMPLOYEES: 25 | YEAR:1984 CODE:H
FINANCING:PRI |
| 201 KIRIN-AMGEN
C/O AMGEN, 1900 OAK TERRACE
THOUSAND OAKS CA 91320
PHONE:8054995725 | PRES:DR. GEORGE RATHMAN
LNR&D DIR:
PRODUCTS:R & D ON ERYTHROPOIETIN
EMPLOYEES: | YEAR:1984 CODE:P
FINANCING:PRI |
| 202 LEE BIOMOLECULAR RESEARCH LABS
11211 SORRENTO VALLEY RD
SAN DIEGO CA 92121
PHONE:6194527700 | PRES:DR LEE KRONENBERG
R&D DIR:
PRODUCTS:INTERFERONS;ANTI-INTERFERON SERA;
EMPLOYEES: 16 | YEAR:1980 CODE:W
FINANCING:PRI |
| 203 LIFE SCIENCES
2900 72 ST N
ST PETERSBURG FL 33710
PHONE:8133459371 | PRES:SIMON SRYBNIK
R&D DIR:
PRODUCTS:APPL RES.ON VIRUSES, ANIMAL STRAINS, IFNS
EMPLOYEES: 20 | YEAR:1962 CODE:W
FINANCING:PUB |
| 204 LIFECODES CORP.
4 WESTCHESTER PLAZA
ELMSFORD NY 10523
PHONE:9145924122 | PRES:MR.JOHN K.WINKLER,JR
R&D DIR:DR JEFFREY GLASSBERG
PRODUCTS:REFERENCE LAB TESTS USING DNA PROBES
EMPLOYEES: 53 | YEAR:1982 CODE:K
FINANCING:PRI |
| 205 LIFECORE, INC
315 27TH ST, S.E.
MINNEAPOLIS MN 55414
PHONE:6123798080 | PRES:DR JAMES W BRACKE
R&D DIR:DR KIPLING THACKER
PRODUCTS:HYALURONIC ACID, MEDICAL DEVICES
EMPLOYEES: 20 | YEAR:1975 CODE:J
FINANCING:PUB |
| 206 LIPOSOME COMPANY INC.
ONE RESEARCH WAY
PRINCETON NJ 08540
PHONE:6094527060 | PRES:DR MARC OSTROW
R&D DIR:SAME
PRODUCTS:LIPOSOMES FOR DRUG DELIV AND THERAPEUTIC
EMPLOYEES: 67 | YEAR:1981 CODE:J
FINANCING:PUB |
| 207 LIPOSOME TECHNOLOGY
1050 HAMILTON CT
MENLO PARK CA 94025
PHONE:4153239011 | PRES:PHD.
R&D DIR:
PRODUCTS:LIPOSOMES FOR PHARM, VET, AG, ETC
EMPLOYEES: 65 | YEAR:1981 CODE:J
FINANCING:PRI |

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208 LUCKY BIOTECH CORP. 4560 HORTON ST. EMERYVILLE CA 94608 PHONE:4156530734	PRES:SHIN KOO HUH R&D DIR:DR JOONG MYUNG CHO PRODUCTS:IFN, HEPATITIS-B DX,PORCINE GH EMPLOYEES: 4	YEAR:1984 CODE:P FINANCING:SUB
209 MARCOR DEVELOPMENT CORP. 206 PARK ST. HACKENSACK NJ 07601 PHONE:2014895700	PRES:CHARLES J. GARBARINI R&D DIR:R.G. BERGER, JR. PRODUCTS:REAGENTS FOR FERMENTATION, ENZYMES EMPLOYEES: 6	YEAR:1976 CODE:J FINANCING:PRI
210 MARICULTURA, INC. PO DRAWER 565 WRIGHTSVILLE B NC 28480 PHONE:9192565010	PRES:SAME R&D DIR: PRODUCTS:ALGAL PRODS. COSMET;FOOD;CROP STIM;PHARM EMPLOYEES: 7	YEAR:1986 CODE:T FINANCING:PRI
211 MELOY LABORATORIES, INC. 6715 ELECTRONIC DR. SPRINGFIELD VA 22151 PHONE:7033542600	PRES:DR JAMES TRETTER R&D DIR:WILLIAM DROHAN, PHD PRODUCTS:SERVICES;REAGENTS; RESEARCH & DEVELOPMEN EMPLOYEES: 246	YEAR:1970 CODE:W FINANCING:SUB
212 MICROBIO RESOURCES 6150 LUSK BLVD, SUITE B105 SAN DIEGO CA 92121 PHONE:6195870600	PRES:DEXTER W GASTON R&D DIR: PRODUCTS:FOOD ADDITIVES & COLORANTS;SPECIAL CHEMS EMPLOYEES: 39	YEAR:1981 CODE:J FINANCING:PRI
213 MICROBIOLOGICAL ASSOCIATES 5221 RIVER RD BETHESDA MD 20816 PHONE:3016543400	PRES:DR JOHN C. PARKER R&D DIR:DR STEPHEN MASTIN PRODUCTS:TOX TESTING FOR GOVT, SOME PROD DEVEL EMPLOYEES: 215	YEAR:1947 CODE:Y FINANCING:PRI
214 MICROGENICS 2341 STANWELL DR CONCORD CA 94520 PHONE:4156857729	PRES:DR.BURT G. VOORHEES R&D DIR:DR PYARE KHANNA PRODUCTS:DX ASSAYS; DIGOXIN ASSAY EMPLOYEES: 70	YEAR:1981 CODE:K FINANCING:PRI
215 MOLECULAR BIOSYSTEMS, INC. 11180 ROSELLE ST, SUITE A SAN DIEGO CA 92121 PHONE:6194520681	PRES:MR VINCENT A FRANK R&D DIR:RICHARD H TULLIS PRODUCTS:DNA PROBES, AIDS SCREENING TEST EMPLOYEES: 27	YEAR:1980 CODE:G FINANCING:PUB
216 MOLECULAR DIAGNOSTICS, INC. 400 MORGAN LANE WEST HAVEN CT 06516 PHONE:2039349229	PRES:GORDON P POLLEY R&D DIR: PRODUCTS:NONE, LICENSES ALL COMMERCIALIZATION EMPLOYEES: 30	YEAR:1980 CODE:K FINANCING:SUB

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217 MOLECULAR GENETIC RESOURCES 6201 JOHNS RD., SUITE 8 TAMPA FL 33634 PHONE:8138865338	PRES:DR. G.E. HOUTS R&D DIR: PRODUCTS:REV.TRANSSCRIPTASE;TERM.TRANSFERASE EMPLOYEES: 5	YEAR:1983 CODE:G FINANCING:PRI
218 MOLECULAR GENETICS, INC 10320 BREN ROAD EAST MINNETONKA MN 55343 PHONE:6129357335	PRES:DR CHARLES MUSCOPLAT R&D DIR:DR DAVID REED PRODUCTS:AG AND VET PRODS, SCOURS VACCINE;DXS EMPLOYEES: 125	YEAR:1979 CODE:A FINANCING:PUB
219 MONOCLONAL ANTIBODIES, INC. 2319 CHARLESTON RD. MOUNTAIN VIEW CA 94043 PHONE:4159601320	PRES:THOMAS A. GLAZE R&D DIR:JOHN C. LANKFORD, III PRODUCTS:DIAGNOSTIC TEST KITS EMPLOYEES: 136	YEAR:1979 CODE:K FINANCING:PUB
220 MONOCLONAL PRODUCTION INT'L .TWENTIETH AND SYDNEY STS. FORT SCOTT KS 66701 PHONE:3162230688	PRES:WILBUR SMITH R&D DIR: PRODUCTS:MABS FORMED IN SHEEP/COW UTERUS EMPLOYEES: 4	YEAR:1983 CODE:X FINANCING:PRI
221 MONOCLONETICS INTERNAT'L, INC. 18333 EGRET BAY BLVD, STE 270 HOUSTON TX 77058 PHONE:7133351611	PRES:DR RICH E WARRINGTON R&D DIR: PRODUCTS:HUMAN SCREENING TESTS & DIAGN TESTS EMPLOYEES: 5	YEAR:1984 CODE:G FINANCING:PRI
222 MULTIPLE PEPTIDE SYSTEMS INC 558 FORD AVE,POB 5000 SOLANA BEACH CA 92705 PHONE:6194812677	PRES:DR C. HENDRICKSON R&D DIR: PRODUCTS:EQUIP; COMPLETE HF SYSTEMS; BRAIN SLICER EMPLOYEES: 2	YEAR:1986 CODE:F FINANCING:PRI
223 MUREX CORP. PO BOX 2003 NORCROSS GA 30071 PHONE:4046620660	PRES:JAREL R. KELSEY R&D DIR:WILLIAM M. MARTIN PRODUCTS:MAB REAGENTS & ANTIBODY KITS EMPLOYEES: 180	YEAR:1984 CODE:K FINANCING:PRI
224 MYCOGEN 5451 OBERLIN DR SAN DIEGO CA 92121 PHONE:6194538030	PRES:DR. JERRY CAULDER R&D DIR: PRODUCTS:PLANT HERBICIDES BASED ON NAT. PATHOGENS EMPLOYEES: 50	YEAR:1982 CODE:B FINANCING:PRI
225 MYCOSEARCH, INC. P.O. BOX 941 CHAPEL HILL NC 27514 PHONE:9199680730	PRES:DR. BARRY KATZ R&D DIR: PRODUCTS:CULTURES OF RARE & NEW FUNGI;LIVE CULTUR EMPLOYEES: 4	YEAR:1979 CODE:H FINANCING:PRI

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226 NATIONAL GENO SCIENCES 22150 W NINE MILE ROAD SOUTHFIELD MI 48034 PHONE:3135528540	PRES: R&D DIR: PRODUCTS:UNKNOWN EMPLOYEES: 4	YEAR:1980 CODE:S FINANCING:PRI
227 NEOGEN CORP. 620 LESHER PLACE LANSING MI 48912 PHONE:5173729200	PRES:DRJAMES L.HERBERT, JR R&D DIR:DR BRINTON M. MILLER PRODUCTS:FOOD, PLANT HEALTH, ANIMAL HEALTH EMPLOYEES:	YEAR:1981 CODE:B FINANCING:PRI
228 NEORX CORP. 410 W. HARRISON ST. SEATTLE WA 98119 PHONE:2062817001	PRES:DR ROBERT T. ABBOTT R&D DIR:DR ALAN R. FRITZBERG PRODUCTS:MELANOMA IMAGING AGENT-TECHNETINUM EMPLOYEES: 100	YEAR:1984 CODE:P FINANCING:PRI
229 NEUSHUL MARICULTURE 475 KELLOGG WAY GOLETA CA 93117 PHONE:8059645844	PRES:SAME R&D DIR:GEOFFRY BROSEAU PRODUCTS:ANIT-VIRAL;ENZYMES;MOLLUSCAN SEED & CULT EMPLOYEES: 6	YEAR:1978 CODE:T FINANCING:PRI
230 NMS PHARMACEUTICALS 1533 MONROVIA AV NEWPORT BEACH CA 92663 PHONE:7146452111	PRES:JOSEPH H. IRANI R&D DIR:SIEGFRIED KRUTZIK PRODUCTS:DIAGNOSTICS AND PHARMACEUTICALS EMPLOYEES: 30	YEAR:1971 CODE:K FINANCING:PUB
231 NORTH COAST BIOTECHNOLOGY INC 19701 S MILES RD WARENSVILLE HT OH 44128 PHONE:2165870000	PRES:DR DAVID P NORBY R&D DIR: PRODUCTS:ENZYMES FOR PHARMACEUTICAL MANUFACTURING EMPLOYEES: 2	YEAR:1986 CODE:P FINANCING:PRI
232 NPI 417 WAKARA WAY SALT LAKE CITY UT 84108 PHONE:8015820144	PRES: R&D DIR:CYRUS MCKELL PRODUCTS:POTATO & FLOWER SEEDS;SOIL INNOCUL;SEEDS EMPLOYEES: 625	YEAR:1973 CODE:B FINANCING:PUB
233 NUCLEAR & GENETIC TECHNOLOGY 172 BROOK AVE DEER PARK NY 11729 PHONE:5162429800	PRES:CLIFFORD E. HOTTE R&D DIR: PRODUCTS:RADIOLABELED MABS FOR CANCER DX EMPLOYEES: 15	YEAR:1980 CODE:K FINANCING:PUB
234 NYGENE CORP. ONE ODELL PLAZA YONKERS NY 10701 PHONE:9149648300	PRES:FRANK P. BRUNETTA R&D DIR:DR ZENON STEPLEWSKI PRODUCTS:BIOAFFINITY SEPARAT SYS;HYBRIDOMA PRODUC EMPLOYEES: 18	YEAR:1985 CODE:F FINANCING:PRI

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235 O.C.S. LABS BOX 2868 DENTON TX 76202 PHONE:8175659998	PRES:MIGUEL M. CASTRO R&D DIR:DEBORAH R. CASTRO PRODUCTS:CUSTOM MADE SYNTHETIC GENES & PEPTIDES EMPLOYEES: 12	YEAR:1984 CODE:J FINANCING:PRI
236 OCEAN GENETICS 140 DUBOIS ST. SANTA CRUZ CA 95060 PHONE:4159458494	PRES:SAME R&D DIR: PRODUCTS:SPEC CHEMS & PHARMACEUT OF MARINE ALGAE EMPLOYEES: 8	YEAR:1981 CODE:T FINANCING:PRI
237 OMNI BIOCHEM, INC. 2215 CLEVELAND AVE NATIONAL CITY CA 92050 PHONE:6195410309	PRES:DR. K.C. BASAVA R&D DIR: PRODUCTS:PEPTIDES;ENZYMES;AMINO ACIDS;REAGENTS. EMPLOYEES: 5	YEAR:1986 CODE:J FINANCING:PRI
238 ONCOGENE SCIENCE, INC 222 STATION PLACE N., ROOM 301 MINEOLA NY 11501 PHONE:5168772882	PRES:MR ROBERT E IVEY R&D DIR:JOHN R. STEPHENSON PRODUCTS:ONCOGENE PROBS FOR DX AND THERAP, MABS EMPLOYEES: 50	YEAR:1983 CODE:K FINANCING:PUB
239 PEL-FREEZ BIOLOGICALS, INC. P.O. BOX 68 ROGERS AR 72757 PHONE:8006433426	PRES:MR. DAVID DUBBELL R&D DIR:DR P.K. CHUNG PRODUCTS:VARIOUS SPECIALTY REAGENTS, MAB SERA,ETC EMPLOYEES:	YEAR:1911 CODE:G FINANCING:PRI
240 PENINSULA LABORATORIES, INC 611 TAYLOR WAY BELMONT CA 94002 PHONE:4155925392	PRES:MEIKYO SHIMIZU R&D DIR:BILL PETERSON PRODUCTS:PEPTIDES, ENZYMES, SPECIALTY REAGENTS EMPLOYEES:	YEAR:1971 CODE:J FINANCING:PRI
241 PETROFERM USA 5400 FIRST COAST HGWY, STE 200 FERANDINA BEAC FL 32034 PHONE:9042618286	PRES:MR. THOMAS P. TAYLOR R&D DIR: PRODUCTS:MICROBIALS FOR IMPROVED FUELS EMPLOYEES: 68	YEAR:1977 CODE:L FINANCING:PRI
242 PETROGEN INC. 2452 EAST OAKTON ARLINGTON HGTS IL 60005 PHONE:3129521309	PRES:DR. KEITH PUGH R&D DIR: PRODUCTS:MICROBES FOR IMPROVED OIL REVOV. EMPLOYEES:	YEAR:1980 CODE:L FINANCING:PRI
243 PHARMACIA BIOTECHNOLOGY GROUP 800 CENTENNIAL AVE. PISCATAWAY NJ 08854 PHONE:2014578000	PRES:DR.RICH L.EASTERDAY R&D DIR:DR.ROBERT M.FLORA PRODUCTS:CHROMA SEPARATION CHEMICALS & INSTRUMENT EMPLOYEES:	YEAR:1960 CODE:E FINANCING:SUB

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244 PHARMATEC, INC 9401 S VERMONT AVE, SUITE B100 TORRANCE CA 90502 PHONE:	PRES:WARREN STERN, PHD R&D DIR: PRODUCTS:DRUG DEL'Y OF SYNTHETICS THRU BB BARRIER EMPLOYEES: 25	YEAR:1982 CODE:P FINANCING:PRI
245 PHYTOGEN 101 WAVERLY AVE. PASADENA CA 91105 PHONE:8187921802	PRES: R&D DIR:DR. DAVID ANDERSON PRODUCTS:VECTOR FOR PLANT TRANSFORMATION-PATENT EMPLOYEES: 20	YEAR:1980 CODE:B FINANCING:PRI
246 PLANT GENETICS, INC. 1930 FIFTH ST. DAVIS CA 95616 PHONE:9167531400	PRES:DR ZACHARY S. WOCHOK R&D DIR:DR KEITH A. WALKER PRODUCTS:POTATO TR;HYBRID VEGS EMPLOYEES: 63	YEAR:1981 CODE:B FINANCING:PRI
247 PRAXIS BIOLOGICS 30 CORPORATE WOODS,STE300 ROCHESTER NY 14623 PHONE:7162727000	PRES:DR DAVID H SMITH R&D DIR: PRODUCTS:VACCINES,TEST KITS,THERAPEUTICS EMPLOYEES:	YEAR:1983 CODE:Q FINANCING:PUB
248 PROMEGA BIOTECH 2800 SOUTH FISH HATCHERY RD. MADISON WI 53711 PHONE:6082744330	PRES:WILLIAM LINTON R&D DIR:RANDALL DIMOND PRODUCTS:REAGENTS FOR MOLECULAR BIOLOGY EMPLOYEES:	YEAR:1978 CODE:G FINANCING:PRI
249 PROTATEK INTERNATIONAL, INC. 1491 ENERGY PARK DRIVE ST. PAUL MN 55108 PHONE:6126445391	PRES: R&D DIR: PRODUCTS:VIRUS, TEST KITS, SPECIALIZED MICROBES EMPLOYEES:	YEAR:1985 CODE:K FINANCING:PRI
250 QUEUE SYSTEMS INC PO BOX 5366 NORTH BRANCH NJ 08876 PHONE:3044645400	PRES:WM. GELB R&D DIR: PRODUCTS:CRYO PRESERVATION;CELL CULTURE;ENVIR SEP EMPLOYEES: 85	YEAR:1980 CODE:F FINANCING:PRI
251 QUIDEL 11077 N. TORREY PINES RD. LA JOLLA CA 92037 PHONE:6194501533	PRES:JOSEPH STEMLER R&D DIR:DR DAVID H. KATZ PRODUCTS:DX ASSAYS-PREG,FERT,STREP-A,ALLERY,INFEC EMPLOYEES: 325	YEAR:1981 CODE:P FINANCING:PRI
252 R & A PLANT/SOIL INC. 24 PASCO KAHLOTUS RD PASCO WA 99301 PHONE:5095456867	PRES:DR RONALD JOHNSON R&D DIR:DR BLAINE METTING PRODUCTS:ALGAL SOIL CONDITIONERS, FERTILIZERS,ETC EMPLOYEES: 6	YEAR:1978 CODE:T FINANCING:PRI

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253 RECOMTEX CORP. 4700 SO HAGADORN, STE 290 EAST LANSING MI 48823 PHONE:5173321600	PRES:ALAN P. SUITS R&D DIR:HAROLD L. SADOFF PRODUCTS:GENETIC DX EMPLOYEES: 12	YEAR:1981 CODE:K FINANCING:PRI
254 REPLIGEN CORP. ONE KENDALL SQ. BLDG. 700 CAMBRIDGE MA 02139 PHONE:6172256000	PRES:SANDFORD D. SMITH R&D DIR:DR. THOMAS FRASER PRODUCTS:ENXYMES, PROTEINS, RECOMB PROT A, HTLVIII EMPLOYEES:	YEAR:1981 CODE:J FINANCING:PUB
255 RESEARCH&DIAGNOSTIC ANTIBODIES PO BOX 7653 BERKELEY CA 94707 PHONE:4156527330	PRES:DR ROBERT J WEBBER R&D DIR: PRODUCTS:DIAGNOSTIC KITS, MAB REAGENTS EMPLOYEES:	YEAR:1985 CODE:K FINANCING:PRI
256 RIBI IMMUNOCHEM RESEARCH, INC. P.O. BOX 1409 HAMILTON MT 59840 PHONE:4063636214	PRES: R&D DIR:EDGAR E. RIBI PRODUCTS:VET-ANTI-TUMOR PROD; VET DX; VET VACCINES EMPLOYEES: 35	YEAR:1981 CODE:P FINANCING:PUB
257 RICERCA, INC 7528 AUBURN RD, BOX 100 PAINESVILLE OH 44077 PHONE:2163573000	PRES: R&D DIR:DR. RITA MANAK PRODUCTS:FERMENTATION AND RESEARCH EMPLOYEES: 160	YEAR:1986 CODE:S FINANCING:SUB
258 SCOTT LABORATORIES 771 MAIN ST FISKVILLE RI 40182 PHONE:8005566480	PRES:MR.DAVID MAIDMAN R&D DIR:GARY WITMAN PRODUCTS:REAGENTS AND SPECIALTY CHEMICALS EMPLOYEES: 375	YEAR:1981 CODE:G FINANCING:SUB
259 SCRIPPS LABORATORIES 9950 SCRIPPS LAKE DRIVE SAN DIEGO CA 92131 PHONE:6195663505	PRES:MR. SIMON KHOURY R&D DIR: PRODUCTS:BULK HUMAN PROTEINS; HORMONES; ENZYMES EMPLOYEES:	YEAR:1980 CODE:P FINANCING:PRI
260 SEAPHARM, INC. 791 ALEXANDER RD. PRINCETON NJ 08540 PHONE:6094527140	PRES: R&D DIR: PRODUCTS:MARINE PHARMACEUTICAL PRODS; TISSUE CULT EMPLOYEES: 50	YEAR:1983 CODE:T FINANCING:PRI
261 SEPRACOR, INC. 33 LOCKE DRIVE MARLBOROUGH MA 01752 PHONE:6174600412	PRES:TIMOTHY J BARBERICH R&D DIR:STEPHEN MATSON PRODUCTS:MEMBRANE COLUMNS-ANTI-FACTOR 7 & ANTI-TPA EMPLOYEES: 40	YEAR:1984 CODE:B FINANCING:PRI

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262 SERAGEN, INC 54 CLAYTON ST BOSTON MA 02122 PHONE:6174352335	PRES:MR KARL AHRENDT R&D DIR:J. CAMPBELL PRODUCTS:R & D IMMUNOLOGICS, REAGENTS, ANTISERA, ETC EMPLOYEES: 250	YEAR:1979 CODE:X FINANCING:SUB
263 SERONO LABS 280 POND ST RANDOLPH MA 02368 PHONE:6179638154	PRES:GERALD E STILES R&D DIR:RUSSEL W PELHAM PRODUCTS:DRUGS AND DXS IN FERTIL, GRWTH, IMMUN, VIRO EMPLOYEES: 90	YEAR:1971 CODE:P FINANCING:PRI
264 SIBIA PO BOX 85200 SAN DIEGO CA 92138 PHONE:6194525892	PRES:FREDERIC DE HOFFMAN R&D DIR:CHARLES COOK PRODUCTS:SALK INSTITUTE'S RESEARCH FIRM EMPLOYEES: 65	YEAR:1981 CODE:W FINANCING:PRI
265 SOUTHERN BIOTECH ASSOCIATES PO BOX 26221 BIRMINGHAM AL 35226 PHONE:2059451774	PRES:DR. WILLIAM GATHINGS R&D DIR:JOYCE LEHMEYER PRODUCTS:PRODUCE COLLAGEN AND ANTIBODIES TO IT EMPLOYEES: 9	YEAR:1982 CODE:J FINANCING:PRI
266 STRATAGENE CLONING SYSTEMS 3770 TANSY ST SAN DIEGO CA 92121 PHONE:6194589151	PRES:DR ANTHONY SORGE R&D DIR: PRODUCTS:BT REAGENTS EMPLOYEES: 40	YEAR:1984 CODE:G FINANCING:PRI
267 SUMMA MEDICAL CORP. 4272 BALLOON PARK RD, NE ALBUQUERQUE NM 87109 PHONE:5053458891	PRES:FRANCISCO URREA, JR. R&D DIR:PAUL O. ZAMORA, PHD PRODUCTS:HISTOCHEMICAL MARKERS AND KITS, CA DX EMPLOYEES: 33	YEAR:1978 CODE:G FINANCING:PUB
268 SUNGENE TECHNOLOGIES CORP 3330 HILLVIEW AVE. PALO ALTO CA 94304 PHONE:4158563200	PRES:MR.WM J REID R&D DIR:DR ROBERT L ERWIN PRODUCTS:PLANT BREEDING EMPLOYEES: 28	YEAR:1981 CODE:B FINANCING:PRI
269 SYNBIOTICS CORP. 11011 VIA FRONTERA SAN DIEGO CA 92129 PHONE:6194513770	PRES:DR EDWARD T. MAGGIO R&D DIR:MORTON A. VODIAN PRODUCTS:VET DX; HUMAN DX; VACCINES; EMPLOYEES: 89	YEAR:1982 CODE:K FINANCING:PUB
270 SYNERGEN, INC. 1885 33RD ST. BOULDER CO 80301 PHONE:3039386200	PRES:DR LARRY SOLL R&D DIR:DR DAVID I. HIRSCH PRODUCTS:RESEARCH FOR HUM AND ANIMAL PHARMACEUTS EMPLOYEES: 101	YEAR:1980 CODE:W FINANCING:PUB

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271 SYNGENE PRODUCTS 15 AND OAK, PO BOX 338 ELWOOD KS 66024 PHONE:8002556829	PRES:DR V DAVID HEIN R&D DIR:SCOTT WINSTON PRODUCTS:PRODUCTS FOR ANIMALS AND HUMAN HEALTH EMPLOYEES: 20	YEAR:1980 CODE:P FINANCING:SUB
272 SYNTRO CORP. 10655 SORRENTO VALLEY RD SAN DIEGO CA 92121 PHONE:6194534000	PRES:DR J THOMAS PARMETER R&D DIR:DR RONALD D BROWN PRODUCTS:ANIMAL VACCINES & DX;ANIMAL HEALTH PRODS EMPLOYEES: 84	YEAR:1981 CODE:A FINANCING:PUB
273 SYVA CO 900 ARASTRADERO RD PALO ALTO CA 94304 PHONE:4154932200	PRES:MR WM GOMEZ R&D DIR:DR TED ULLMAN PRODUCTS:DX PRODS;TH DRUG MONIT;DRG ABU/TOX;STDS EMPLOYEES: 1000	YEAR:1966 CODE:K FINANCING:SUB
274 T-CELL SCIENCES 840 MEMORIAL DRIVE CAMBRIDGE MA 02139 PHONE:6178642160	PRES: R&D DIR: PRODUCTS:6 MABS; 1 CELLFREE SANDWICH ASSAY KIT EMPLOYEES: 49	YEAR:1983 CODE:P FINANCING:PUB
275 TECHNICLONE INTERNATIONAL, INC 3301 S HARBOR BLVD., STE 101 SANTA ANA CA 92704 PHONE:7145575913	PRES:ROBERT LUNDAK R&D DIR: PRODUCTS: EMPLOYEES: 9	YEAR:1981 CODE:K FINANCING:PUB
276 TECHNOMETRICS, INC. 1960 SHERRELWOOD CIRCLE DENVER CO 80221 PHONE:3034280326	PRES:MR FARRELL NORTH R&D DIR:V. A. VASEEN PRODUCTS:ROTATING DRUM REACTOR-CONTINUOUS FERMENT EMPLOYEES:	YEAR:1982 CODE:O FINANCING:PRI
277 THREE-M(3M) DIAGNOSTIC SYSTEMS 1500 SALADO DRIVE MOUNTAIN VIEW CA 94043 PHONE:4159657710	PRES:GEN MGR-SEVERSON, C R&D DIR: PRODUCTS:DIAGNOSTICS EMPLOYEES: 130	YEAR:1981 CODE:K FINANCING:SUB
278 TOXICON 125 LENOX ST. NORWOOD MA 02062 PHONE:6177698820	PRES: R&D DIR:DR. JAMES KINCH PRODUCTS:TOXICOLOGY SERVICE;REGISTRATION SUPPORT EMPLOYEES: 35	YEAR:1978 CODE:U FINANCING:PRI
279 TRANSFORMATION RESEARCH INC. PO BOX 2411 FRAMINGHAM MA 01701 PHONE:6177834124	PRES:DR. JEFF YEH R&D DIR: PRODUCTS:ANTIBODIES EMPLOYEES: 4	YEAR:1981 CODE:X FINANCING:PRI

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280 TRITON BIOSCIENCES, INC. 1501 HARBOR BAY PKWY ALAMEDA CA 94501 PHONE:4157695250	PRES:MR RICHARD L LOVE R&D DIR: PRODUCTS:REAGENTS FOR CA & HISTOPATH RES;DX PRODS EMPLOYEES: 140	YEAR:1983 CODE:P FINANCING:SUB
281 UNIGENE LABORATORIES, INC. 110 LITTLE FALLS RD. FAIRFIELD NJ 07006 PHONE:2018820860	PRES:WARREN P. LEVY,PH.D. R&D DIR: PRODUCTS:NONE RESEARCH ON PEPTIDE HORMONES, ENZYM EMPLOYEES: 30	YEAR:1980 CODE:P FINANCING:PRI
282 UNITED AGRISEEDS INC PO BOX 4011 CHAMPAIGN IL 61820 PHONE:2173735300	PRES:ROD N STACEY R&D DIR:DR JOHN R. SNYDER PRODUCTS:RESEARCH ON PLANTS, SEEDS, ETC EMPLOYEES: 192	YEAR:1981 CODE:B FINANCING:PRI
283 UNITED BIOMEDICAL INC 2 NEVADA DRIVE LAKE SUCCESS NY 11042 PHONE:5163541060	PRES:MR NEAN HU R&D DIR: PRODUCTS:DIAGNOSTICS, MABS, SPECIALTY PROTEINS EMPLOYEES: 10	YEAR:1984 CODE:K FINANCING:PRI
284 UNITED STATES BIOCHEMICAL CORPPRES:MR. THOMAS A. MANN 26111 MILES RD. CLEVELAND OH 44128 PHONE:2167655000	R&D DIR:PARKE FLICK PRODUCTS:REAGENTS AND EQUIPMENT EMPLOYEES:	YEAR:1973 CODE:G FINANCING:PRI
285 UNIVERSITY GENETICS CO. 1465 POST ROAD E. WESTPORT CT 06881 PHONE:2032592829	PRES:MR RANDALL CHARLTON R&D DIR:DR DONALD J. SILVERT PRODUCTS:LICENSES;50 CLON OR CULT PLANT; CELL&EMB EMPLOYEES: 100	YEAR:1981 CODE:A FINANCING:PUB
286 UNIVERSITY MICRO REFERENCE LABPRES:DR REX A. D'AGOSTINO 611(P) HAMMONDS FERRY RD LINTHICUM MD 21090 PHONE:8004684876	R&D DIR: PRODUCTS:BACTERIAL REFERENCE STRAINS EMPLOYEES:	YEAR:1980 CODE:G FINANCING:PRI
287 VECTOR LABORATORIES, INC. 30 INGOLD RD BURLINGAME CA 94010 PHONE:4159673600	PRES:DR JAMES S WHITEHEAD R&D DIR:DR LAURENCE MCINTYRE PRODUCTS:MOLEC BIOL REAGENTS AND EQUIP. EMPLOYEES:	YEAR:1976 CODE:G FINANCING:PRI
288 VEGA BIOTECHNOLOGIES, INC. P.O.BOX11648 TUCSON AZ 85734 PHONE:8005284882	PRES:VEL CUBRILOVIC R&D DIR:DR.CHAS M.GROGINSKY PRODUCTS:PEPTIDE SYNTHESIZERS;REAGENTS;ENZYMES SUB EMPLOYEES:	YEAR:1979 CODE:F FINANCING:PUB

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289 VERAX CORP. HC61 BOX 6 ETNA RD. LEBANON NH 03766 PHONE:6034484445	PRES:FRED HILDEBRAND R&D DIR:DR EDWARD HAYMAN PRODUCTS:LARGE SCALE CELL CULTURING PROD MODEL EMPLOYEES: 80	YEAR:1979 CODE:O FINANCING:PRI
290 VIRAGEN 2201 WEST 36TH ST HIALEAH FL 33016 PHONE:3055584000	PRES:THOMAS LANGBEIN R&D DIR:DR DAVID C MUNCH PRODUCTS:INTERFERONS, PEPTIDES, ETC EMPLOYEES: 15	YEAR:1980 CODE:P FINANCING:PUB
291 WESTBRIDGE RESEARCH GROUP 9920 SCRIPPS LAKE DRIVE SAN DIEGO CA 92131 PHONE:6195867211	PRES:MR.GERALD R. HADDOCK R&D DIR:THEODORE A. HYMOS PRODUCTS:PLANT GRWTH REGULAT;WATER TREAT'T;ANIMAL EMPLOYEES: 15	YEAR:1982 CODE:J FINANCING:PRI
292 XENOGEN 1734 STORRS RD MANSFIELD CT 06268 PHONE:2034296500	PRES:SAME R&D DIR:MITCHEL SAYRE PRODUCTS:RDNA RESEARCH FOR DIAGNOS AND CHEMICALS EMPLOYEES:	YEAR:1981 CODE:W FINANCING:PRI
293 XOMA CORP. 2910 SEVENTH ST. BERKELEY CA 94710 PHONE:4156441170	PRES:DR PATRICK J SCANNON R&D DIR:SAME PRODUCTS:MAB BASED ANTICANCER THERAPEUTICS EMPLOYEES: 123	YEAR:1981 CODE:P FINANCING:PUB
294 ZOECON CORP.(SANDOZ CROP PRO) 975 CALIFORNIA AV.#10975 PALO ALTO CA 94304 PHONE:4158571130	PRES: R&D DIR:LK GRILL PRODUCTS:PLANT IMPROVEMENT AND AG CHEMICALS EMPLOYEES: 130	YEAR:1968 CODE:B FINANCING:SUB
295 ZYMED LABORATORIES, INC. 52 S. LINDEN AVE,SUITE 4 S.SANFRANCISCO CA 94080 PHONE:4158714494	PRES:DEAN TSAO, PH.D. R&D DIR:DR AGUSTIN BELLA,JR PRODUCTS:IMMUNOCHEMICALS EMPLOYEES: 20	YEAR:1980 CODE:G FINANCING:PRI
296 ZYMOGENETICS, INC. 2121 N. 35TH ST. SEATTLE WA 98103 PHONE:2066324036	PRES:GREGORY PHELPS R&D DIR:DR BRUCE CARTER PRODUCTS:R&D-YEAST, CELLS, FUNGI, HUMAN SERA PROTEIN EMPLOYEES: 95	YEAR:1981 CODE:P FINANCING:PRI

STATE	COMPANY NAME	STATE	COMPANY NAME
AL	SOUTHERN BIOTECH ASSOCIATES PO BOX 26221 BIRMINGHAM AL 35226 2059451774	AR	PEL-FREEZ BIOLOGICALS, INC. P.O. BOX 68 ROGERS AR 72757 8006433426
AZ	BIO HUMA NETICS 201 ROOSEVELT AV CHANDLER AZ 85226 6029611220	AZ	VEGA BIOTECHNOLOGIES, INC. P.O.BOX11648 TUCSON AZ 85734 8005284882
CA	ADVANCED GENETIC SCIENCES 6701 San Pablo Ave. Oakland CA 94608 4155472395	CA	ADVANCED GENETICS RES. INST. 2220 Livingston St. Oakland CA 94606 4155342474
CA	AGOURON INSTITUTE 505 COAST BLVD. S. LA JOLLA CA 92037 6194565300	CA	AMERICAN BIOGENETICS CORP 19732 MACARTHUR BLVD IRVINE CA 92715 7148517733
CA	AMERICAN BIONETICS, INC (ABN) 4560 HORTON ST EMERYVILLE CA 94608 4156524466	CA	AMERICAN QUALEX INTL, INC 14620 E. Firestone BLVD La Mirada CA 90638 7145213753
CA	AMGEN 1900 Oak Terrace LA Thousand Oaks CA 91320 8054995725	CA	ANTIBODIES, INC. P.O. Box 1560 Davis CA 95617 8008248540
CA	APPLIED BIOSYSTEMS 850 Lincoln Center Drive Foster City CA 94404 4155706667	CA	AUTOMEDIX SCIENCES, INC 9401 S VERMONT AVE, SUITE B100 TORRANCE CA 90502 2133271112
CA	BEHRING DIAGNOSTICS 10933 N. Torrey Pines Rd. La Jolla, CA 92037 8008549256	CA	BERKELEY ANTIBODY 4131 LAKESIDE DR SUITE B RICHMOND CA 94806 4152224940
CA	BIO-RESPONSE INC. 1978 W WINTON AVE. HAYWARD CA 94545 4157869744	CA	BIOGENEX LABORATORIES 6549 Sierra Lane Dublin CA 94568 8004214149
CA	BIOPROBE INTERNATIONAL, INC. 2842 WALNUT AVE. SUITE C TUSTIN CA 92680 7145444035	CA	BIOSEARCH, INC. 2980 Kerner Blvd. San Rafael CA 94901 8002272624

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STATE	COMPANY NAME	STATE	COMPANY NAME
CA	BIOOTHERAPY SYSTEMS, INC. 291 N. Bernardo Ave. Mountain View CA 94043 4159401200	BREIT LABORATORIES 2510 BOATMAN AV W. SACRAMENTO CA 95691 9163724088	
CA	CALGENE, INC. 1920 5th St. Davis CA 95616 9167536313	CALIFORNIA BIOTECHNOLOGY INC. 2450 Bayshore Frontage Rd Mountain View CA 94043 4159661550	
CA	CALIFORNIA INTEGRATED DIAGNOST 1440 FOURTH ST BERKELEY CA 94710 4155279400	CALZEME LABORATORIES, INC. 3443 MIGUELITO CT SAN LUIS OBISP CA 93401 8055415754	
CA	CETUS CORPORATION 1400 FIFTY-THIRD ST. EMERYVILLE CA 94608 4154203300	CHEMICON INTERNATIONAL, INC 100 LOMITA STREET EL SEGUNDO CA 90245 2133222451	
CA	CHIRON CORPORATION 4560 HORTON ST EMERYVILLE CA 94608 4154762624	CLONTECH LABORATORIES, INC. 4055 FABIAN WAY PALO ALTO CA 94303 4154248188	
CA	CODON 430 VALLEY DRIVE BRISBANE CA 94005 4154686300	COLLAGEN CORPORATION 2500 FABER PLACE PALO ALTO CA 94303 4158560200	
CA	COOPER DEVELOPMENT CO. 3145 PORTER DR. PALO ALTO CA 94304 2152512000	CYGNUS RESEARCH CORP. 701 GALVESTON DR REDWOOD CA 94063 4153694300	
CA	CYTOTECH, INC 11045 ROSELLE ST SAN DIEGO CA 92121 6194521556	DAKO CORP 22 NORTH MILPAS ST SANTA BARBARA CA 93103 8002355743	
CA	DIAGNOSTIC PRODUCTS, CORP. 5700 W 96 ST LOS ANGELES CA 90045 2137760180	DNAX 901 CALIFORNIA AV PALO ALTO CA 94304 4158529196	
CA	E-Y LABORATORIES, INC 107 N. AMPHLETT BLVD. SAN MATEO CA 94401 8008210044	ENGENICS, INC. 3760 HAVEN AVE. MENLO PARK CA 94025 4153248600	

STATE	COMPANY NAME	STATE	COMPANY NAME
CA	ENZON 518 LOGUE AV MOUNTAIN VIEW CA 94043 4159647676	CA	FERMENTEC CORP 101 FIRST ST SUITE 490 LOS ALTOS CA 94022 4159654030
CA	GEN-PROBE, INC. 9880 CAMPUS POINT DR SAN DIEGO CA 92121 6192688400	CA	GENENCOR, INC. 180 KIMBALL WAY S.SAN FRANCISC CA 94080 4157427500
CA	GENENTECH 460 POINT SAN BRUNO BLVD S. SAN FRAN. CA 94080 4152661614	CA	HANA BIOLOGICS, INC. 8050 MARINA VILLAGE PKWY ALMEDA CA 94501 8007724262
CA	HP GENENCHEM 460 POINT SAN BRUNO BLVD. S.SAN FRANCISC CA 94080 4158727057	CA	HYBRITECH, INC. 11095 TORREYANA RD. SAN DIEGO CA 92121 6194556700
CA	IDEC, INC. 11211 SORRENTO VALLEY RD. STE H SAN DIEGO CA 92121 6194580600	CA	IDETEK, INC. 1057 SNEATH LANE SAN BRUNO CA 94066 4159522844
CA	IMMUNETECH PHARMACEUTICALS 11045 ROSELLE ST, SAN DIEGO CA 92121 6194572553	CA	INFERGENE COMPANY 433 INDUSTRIAL WAY BENICIA CA 94510 7077466804
CA	INGENE, INC. 1545 17TH ST SANTA MONICA CA 90404 2138297681	CA	INTEK DIAGNOSTICS, INC. 1450 ROLLINS RD. BURLINGAME CA 94010 4153400530
CA	INTELLI-GENETICS 700 EAST EL CAMINO MOUNTAIN VIEW CA 94040 4159627313	CA	INTERN'TL ENZYMES, INC. 1667 S. MISSION RD. FALLBROOK CA 92028 6197285205
CA	INTERN'TL PLANT RESEARCH INST. 830 BRANSTEN RD. SAN CARLOS CA 94070 4155955335	CA	KIRIN-AMGEN C/O AMGEN, 1900 OAK TERRACE LN THOUSAND OAKS CA 91320 8054995725
CA	LEE BIOMOLECULAR RESEARCH LABS 11211 SORRENTO VALLEY RD SAN DIEGO CA 92121 6194527700	CA	LIPOSOME TECHNOLOGY 1050 HAMILTON CT MENLO PARK CA 94025 4153239011

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CA	LUCKY BIOTECH CORP. 4560 HORTON ST. EMERYVILLE CA 94608 4156530734		MICROBIO RESOURCES 6150 LUSK BLVD, SUITE B105 SAN DIEGO CA 92121 6195870600
	MICROGENICS 2341 STANWELL DR CONCORD CA 94520 4156857729		MOLECULAR BIOSYSTEMS, INC. 11180 ROSELLE ST, SUITE A SAN DIEGO CA 92121 6194520681
	MONOCLONAL ANTIBODIES, INC. 2319 CHARLESTON RD. MOUNTAIN VIEW CA 94043 4159601320		MULTIPLE PEPTIDE SYSTEMS INC 558 FORD AVE, POB 5000 SOLANA BEACH CA 92705 6194812677
	MYCOGEN 5451 OBERLIN DR SAN DIEGO CA 92121 6194538030		NEUSHUL MARICULTURE 475 KELLOGG WAY GOLETA CA 93117 8059645844
	NMS PHARMACEUTICALS 1533 MONROVIA AV NEWPORT BEACH CA 92663 7146452111		OCEAN GENETICS 140 DUBOIS ST. SANTA CRUZ CA 95060 4159458494
	OMNI BIOCHEM, INC. 2215 CLEVELAND AVE NATIONAL CITY CA 92050 6195410309		PENINSULA LABORATORIES, INC 611 TAYLOR WAY BELMONT CA 94002 4155925392
	PHARMATEC, INC 9401 S VERMONT AVE, SUITE B100 TORRANCE CA 90502		PHYTOGEN 101 WAVERLY AVE. PASADENA CA 91105 8187921802
	PLANT GENETICS, INC. 1930 FIFTH ST. DAVIS CA 95616 9167531400		QUIDEL 1077 N. TORREY PINES RD. LA JOLLA CA 92037 6194501533
	RESEARCH&DIAGNOSTIC ANTIBODIES PO BOX 7653 BERKELEY CA 94707 4156527330		SCRIPPS LABORATORIES 950 SCRIPPS LAKE DRIVE SAN DIEGO CA 92131 6195663505
	SIBIA PO BOX 85200 SAN DIEGO CA 92138 6194525892		STRATAGENE CLONING SYSTEMS 3770 TANSY ST SAN DIEGO CA 92121 6194589151

STATE	COMPANY NAME	STATE	COMPANY NAME
CA	SUNGENE TECHNOLOGIES CORP 3330 HILLVIEW AVE. PALO ALTO CA 94304 4158563200	CA	SYNBIOTICS CORP. 11011 VIA FRONTERA SAN DIEGO CA 92129 6194513770
CA	SYNTRO CORP. 10655 SORRENTO VALLEY RD SAN DIEGO CA 92121 6194534000	CA	SYVA CO 900 ARASTRADERO RD PALO ALTO CA 94304 4154932200
CA	TECHNICLONE INTERNATIONAL, INC 3301 S HARBOR BLVD., STE 101 SANTA ANA CA 92704 7145575913	CA	THREE-M(3M) DIAGNOSTIC SYSTEMS 1500 SALADO DRIVE MOUNTAIN VIEW CA 94043 4159657710
CA	TRITON BIOSCIENCES, INC. 1501 HARBOR BAY PKWY ALAMEDA CA 94501 4157695250	CA	VECTOR LABORATORIES, INC. 30 INGOLD RD BURLINGAME CA 94010 4159673600
CA	WESTBRIDGE RESEARCH GROUP 9920 SCRIPPS LAKE DRIVE SAN DIEGO CA 92131 6195867211	CA	XOMA CORP. 2910 SEVENTH ST. BERKELEY CA 94710 4156441170
CA	ZOECON CORP. (SANDOZ CROP PRO) 975 CALIFORNIA AV. #10975 PALO ALTO CA 94304 4158571130	CA	ZYMED LABORATORIES, INC. 52 S. LINDEN AVE, SUITE 4 S. SAN FRANCISCO CA 94080 4158714494
CO	ADVANCED MINERAL TECHNOLOGIES 5920 MCINTYRE GOLDEN CO 80403 3032796982	CO	BIOSTAR MEDICAL PRODUCTS, INC. 5766 Central Ave. Boulder CO 80301 3034471605
CO	COORS BIOTECH PRODUCTS CO. MAIL # CC150 GOLDEN CO 80401 3032773761	CO	GENETIC ENGINEERING, INC. 136 AV & N. WASHINGTON ST PO33554, DENVER CO 80233 3034571311
CO	SYNERGEN, INC. 1885 33RD ST. BOULDER CO 80301 3039386200	CO	TECHNOMETRICS, INC. 1960 SHERRELWOOD CIRCLE DENVER CO 80221 3034280326
CT	AGROTEK 1465 Post Road E., PO-5117 Westport CT 06881 2032592829	CT	AMERICAN DIAGNOSTICA, INC. 111 NORTH STREET GREENWICH CT 06830 2036614331

STATE	COMPANY NAME	STATE	COMPANY NAME
CT	BIOPOLYMERS, INC. 309 FARMINGTON AVE FARMINGTON CT 06032 2036741444		CHIMERIX PO BOX 976 GLASTONBURY CT 06033 2036339515
	DELTOWN CHEMURGIC CORP. 191 MASON ST GREENWICH CT 06830 2036298754		MOLECULAR DIAGNOSTICS, INC. 400 MORGAN LANE WEST HAVEN CT 06516 2039349229
	UNIVERSITY GENETICS CO. 1465 POST ROAD E. WESTPORT CT 06881 2032592829		XENOGEN 1734 STORRS RD MANSFIELD CT 06268 2034296500
DC	ALPHA I BIOMEDICALS 777 14TH ST., NW, SUITE 747 WASHINGTON DC 20005 2026289898	FL	APPLIED GENETICS LABS. INC. 3150 S. Babcock St. Melbourne FL 32901 3057688188
	DIAMEDIX, INC. 2140 NORTH MAIMI AVE MIAMI FL 33127 3053242329		IMMUNOMED 5910-G BRECKENRIDGE PKWY. TAMPA FL 33610 8136219447
	LIFE SCIENCES 2900 72 ST N ST PETERSBURG FL 33710 8133459371		MOLECULAR GENETIC RESOURCES 6201 JOHNS RD., SUITE 8 TAMPA FL 33634 8138865338
	PETROFERM USA 5400 FIRST COAST HWY, STE 200 FERANDINA BEAC FL 32034 9042618286		VIRAGEN 2201 WEST 36TH ST HIALEAH FL 33016 3055584000
GA	BIOSYSTEMS, INC. 762 U.S. Highway 78 Loganville GA 30249 4044661511		MUREX CORP. PO BOX 2003 NORCROSS GA 30071 4046620660
HI	HAWAII BIOTECHNOLOGY GROUP, INC 99-193 AIEA HEIGHTS DR. AIEA HI 96701 8084875565	IA	AMBICO, INC. P.O. Box 522, Rte. 2 Dallas Center IA 50063 5159923747
IL	BALL BIOTECH COMPANY 250 TOWN RD. W. CHICAGO IL 60185 3122313600		DEKALB-PFIZER GENETICS 3100 SYCAMORE RD. DEKALB IL 60115 8157563671

STATE	COMPANY NAME	STATE	COMPANY NAME
IL	INTERN'TL MINERAL & CHEMICAL 2315 SAUNDERS RD NORTHBROOK IL 60062 3125648600	IL	PETROGEN INC. 2452 EAST OAKTON ARLINGTON HGTS IL 60005 3129521309
IL	UNITED AGRISEEDS INC PO BOX 4011 CHAMPAIGN IL 61820 2173735300	IN	AGDIA, INC. 1901 N. Cedar St. Mishawaka IN 46545 2192552817
IL	BIOPRODUCTS FOR SCIENCE, INC. PO BOX 29176 INDIANAPOLIS IN 46229 6082742905	IN	CONSOLIDATED BIOTECHNOLOGY, INC 1413 WEST INDIANA AVE ELKHART IN 46515 2192956767
KS	CLINICAL BIOTECHNOLOGIES, INC. 11844 WEST 85TH ST LENEXA KS 66214 913492	KS	MONOCLONAL PRODUCTION INT'L TWENTIETH AND SYDNEY STS. FORT SCOTT KS 66701 3162230688
KS	SYNGENE PRODUCTS 15 AND OAK, PO BOX 338 ELWOOD KS 66024 8002556829	LA	IMREG, INC. 144 ELK PL., SUITE 1400 NEW ORLEANS LA 70112 5045232875
MA	A/G TECHNOLOGY CORP. 34 WEXFORD ST. NEEDHAM MA 02194 6174495774	MA	ADVANCED MAGNETICS, INC. 45 Spinelli Place Cambridge MA 02138 6174972070
MA	ANGENICS 100 INMAN ST CAMBRIDGE MA 02139 6178766468	MA	APPLIED BIOTECHNOLOGY 80 Rogers St. Cambridge MA 02142 6174927289
MA	APPLIED PROTEIN TECHNOL. INC 103 Brookline St. Cambridge MA 02139 6178686085	MA	BIOASSAY SYSTEMS CORP. 225 WILDWOOD AV WOBURN MA 01801 6179339299
MA	BIOGEN 14 Cambridge Center Cambridge MA 02142 6178648900	MA	BIOMEDICAL TECHNOLOGIES 378 PAGE STREET STOUGHTON MA 02072 6173449942
MA	BIOPURE 136 Harrison Ave. Boston MA 02111 6173507800	MA	BIOTECHNICA INTERNATIONAL 85 Bolton St. Cambridge MA 02140 6178640040

STATE	COMPANY NAME	STATE	COMPANY NAME
MA	BIOTECHNOLOGY DEVELOPMENT CORP 44 Mechanic Street Newton MA 02164 6179657255	MA	CAMBRIDGE BIOSCIENCE CORP. 35 SOUTH ST. HOPKINTON MA 01748 6174359071
MA	CHARLES RIVER BIOTECH.SERVICES 251 BALLARDVALE ST. WILMINGTON MA 01887 6176576500	MA	CHEMGENES 925 WEBSTER ST. NEEDHAM MA 02192 6174495051
MA	COLLABORATIVE RESEARCH INC. 2 OAK PARK BEDFORD MA 01730 6172750004	MA	CORNING BIOMEDICAL RESEARCH 1 KENDALL SQUARE, BLDG 200 CAMBRIDGE MA 02139 6172539602
MA	CREATIVE BIOMOLECULES 35 SOUTH STREET HOPKINTON MA 01748 6174359741	MA	DAMON BIOTECH INC. 119 FOURTH AVE. NEEDHAM HTS. MA 02194 6174490800
MA	ENZYME CENTER INC., THE 36 FRANKLIN ST. MALDEN MA 02148 6173224885	MA	GENETICS INSTITUTE, INC. 87 CAMBRIDGE PARK DR. CAMBRIDGE MA 02140 6178761170
MA	GENZYME CORP. 75 KNEELAND ST. BOSTON MA 02111 8003321042	MA	HYGEIA SCIENCES 330 NEVADA ST. NEWTON MA 02160 6719640200
MA	IMMUNOGEN, INC. 124 MOUNT AUBURN ST, STE 200 CAMBRIDGE MA 02138 6173380800	MA	IMMUNOTECH CORP. PO BOX 860 BOSTON MA 02134 6177871010
MA	INTEGRATED CHEMICAL SENSORS 44 MECHANIC ST NEWTON MA 02164 6179656950	MA	INTEGRATED GENETICS, INC. 31 NEW YORK AVE. FRAMINGHAM MA 01701 6178751336
MA	KARYON TECHNOLOGY, LTD. 333 PROVIDENCE HWY. NORWOOD MA 02062 6177696970	MA	REPLIGEN CORP. ONE KENDALL SQ. BLDG. 700 CAMBRIDGE MA 02139 6172256000
MA	SEPRACOR, INC. 33 LOCKE DRIVE MARLBOROUGH MA 01752 6174600412	MA	SERAGEN, INC 54 CLAYTON ST BOSTON MA 02122 6174352335

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MA	SERONO LABS 280 POND ST RANDOLPH MA 02368 6179638154	MA	T-CELL SCIENCES 840 MEMORIAL DRIVE CAMBRIDGE MA 02139 6178642160
MA	TOXICON 125 LENOX ST. NORWOOD MA 02062 6177698820	MA	TRANSFORMATION RESEARCH INC. PO BOX 2411 FRAMINGHAM MA 01701 6177834124
MD	ADVANCED BIOTECHNOLOGIES 12150 Tech Rd. Silver Spring MD 20904 3016225212	MD	AMERICAN BIOTECHNOLOGY CO 7658 STANDISH PL, SUITE 107 ROCKVILLE MD 20855 3012949553
MD	BIONETICS RESEARCH 5516 NICHOLSON LANE KENSINGTON MD 20895 3018815600	MD	BIOSPHERICS 4928 WYACONDA RD ROCKVILLE MD 20852 3017707700
MD	BIOTECH RESEARCH LABS, INC 1600 EAST GUDE DRIVE ROCKVILLE MD 20850 3012510800	NV	CROP GENETICS INTERNATIONAL, NV 7170 STANDARD DRIVE HANOVER MD 21076 3016212900
MD	DIAGNON CORP. 11 TAFT CT. ROCKVILLE MD 20850 3012520633	MD	GENEX INC. 16020 INDUSTRIAL DR. GAITHERSBURG MD 20877 3012580552
MD	GENTRONIX, INC. 12150 TECH RD SILVER SPRING MD 20904 3012940400	MD	IGEN 1530 E JEFFERSON ST ROCKVILLE MD 20852 3019847964
MD	IGENE BIOTECHNOLOGY INC. 9110 RED BRANCH RD. COLUMBIA MD 21045 3019972599	MD	IN VITRO INTERNATIONAL, INC. 611P HAMMONDS FERRY RD LINTHICUM MD 21090 8004684876
MD	INTER-AMERICAN RESEARCH ASC. 1160 TAFT ST ROCKVILLE MD 20850 3012949442	MD	MICROBIOLOGICAL ASSOCIATES 5221 RIVER RD BETHESDA MD 20816 3016543400
MD	UNIVERSITY MICRO REFERENCE LAB 611(P) HAMMONDS FERRY RD LINTHICUM MD 21090 8004684876	ME	AGRITECH SYSTEMS, INC 104 FORE ST. PORTLAND ME 04101 2077744334

STATE	COMPANY NAME	STATE	COMPANY NAME
ME	ATLANTIC ANTIBODIES 10 Nonesuch Rd. Scarborough ME 04074 8003433430	MA	BINAX, INC 95 DARLING AVE SO PORTLAND ME 04106 2077723544
ME	IMMUCELL CORPORATION 966 RIVERSIDE ST. PORTLAND ME 04103 2077978386	MI	COVALENT TECHNOLOGY CORP. P.O. BOX 1868 ANN ARBOR MI 48106 3137695377
MI	NATIONAL GENO SCIENCES 22150 W NINE MILE ROAD SOUTHFIELD MI 48034 3135528540	MI	NEOGEN CORP. 620 LESHER PLACE LANSING MI 48912 5173729200
MI	RECOMTEX CORP. 4700 SO HAGADORN, STE 290 EAST LANSING MI 48823 5173321600	MN	ENDOTRONICS, INC. 8500 EVERGREEN BLVD. COON RAPIDS MN 55433 6127860302
MN	GENESIS LABS, INC. 5182 WEST 76TH ST MINNEAPOLIS MN 55435 6128353446	WI	LIFECORE, INC 315 27TH ST, S.E. MINNEAPOLIS MN 55414 6123798080
MI	MOLECULAR GENETICS, INC 10320 BREN ROAD EAST MINNETONKA MN 55343 6129357335	WI	PROTATEK INTERNATIONAL, INC. 1491 ENERGY PARK DRIVE ST. PAUL MN 55108 6126445391
MO	BIOCLINICAL SYSTEMS, INC 5977 SW AV ST LOUIS MO 63139 3146473244	WI	INVITRON CORP. 8000 MARYLAND AVE., SU 860 CLAYTON MO 63105 3147278255
MT	GAMETRICS, LTD. COLONY (WYOMING) ROUTE ALZADA MT 59311 3078784494	WI	RIBI IMMUNOCHEM RESEARCH, INC. P.O. BOX 1409 HAMILTON MT 59840 4063636214
NC	BIOTHERM PO BOX 13417 RTP NC 27709 9195442952	WI	EMBREX, INC. 401 OBERLIN RD RALEIGH NC 27605 9198210555
NC	ENVIRONMENTAL DIAGNOSTICS, INC PO BOX 908; 2990 ANTHONY RD BURLINGTON NC 27215 9192266311	WI	MARICULTURA, INC. PO DRAWER 565 WRIGHTSVILLE B NC 28480 9192565010

STATE	COMPANY NAME	STATE	COMPANY NAME
NC	MYCOSEARCH, INC. P.O. BOX 941 CHAPEL HILL NC 27514 9199680730	NE	AMERICAN LABORATORIES, INC 4410 SOUTH 102 ST OMAHA NE 63127 4023392494
	BIOLOGICS CORP 2720 NORTH 84TH ST OMAHA NE 68134 4023937440	NH	VERAX CORP. HC61 BOX 6 ETNA RD. LEBANON NH 03766 6034484445
NJ	AGRI-DIAGNOSTICS ASSOCIATES 2611 Branch Pike Cinnaminson NJ 08077 6098290110		ALFACELL CORPORATION 225 BELLEVILLE AV. BLOOMFIELD NJ 07003 2017488082
	BIO-RECOVERY, INC. P.O. 38, 193 PARIS AVE Northvale NJ 07647 2017849396		BIOCONSEP, INC. RD 3 HOMESTEAD RD BLD 5 UNIT 9 BELLEMEAD NJ 08502 2013596886
	BIOMATRIX, INC. PO 530, 65 RAILROAD AV RIDGEFIELD NJ 07657 2019459550		BIOTEST DIAGNOSTICS CORP 6 DANIEL RD, E. FAIRFIELD NJ 07006 2015754500
	CHEMICAL DYNAMICS CORP. P.O. BOX 395 S. PLAINFIELD NJ 07080 2017535000		CISTRON BIOTECHNOLOGY, INC. 10 BLOOMFIELD AVE, BX 2004 PINE BROOK NJ 07058 2015751700
	CLINICAL SCIENCES, INC. 30 TROY ROAD WHIPPANY NJ 07981 2013860030		CYTODEN CORP 201 COLLEGE RD., E PRINCETON NJ 08540 6099878200
	DNA PLANT TECHNOLOGY CORP. 2611 BRANCH PIKE CINNAMINSON NJ 08077 6098290110		ELECTRO-NUCLEONICS, INC. 350 PASSAIC AV FAIRFIELD NJ 07006 2012276700
	EMTECH RESEARCH 15 W PARK DR MOUNT LAUREL NJ 08054 6098662900		ENZON, INC. 300-C CORPORATE CT. S. PLAINFIELD NJ 07080 2016681800
	GLEN MILLS, INC. 203 BROOKDALE ST. MAYWOOD NJ 07607 2018454665		IMMUNOMEDICS, INC. 5 BRUCE ST NEWARK NJ 07103 2014564779

STATE	COMPANY NAME	STATE	COMPANY NAME
NJ	INTER-CELL TECHNOLOGIES, INC. 422 ROUTE 206, SUITE 143 SOMERVILLE NJ 08876 2013598228		INTERFERON SCIENCES, INC. 783 JERSEY AVE. NEW BRUNSWICK NJ 08901 2012493250
	LIPOSOME COMPANY INC. ONE RESEARCH WAY PRINCETON NJ 08540 6094527060		MARCOR DEVELOPMENT CORP. 206 PARK ST. HACKENSACK NJ 07601 2014895700
	PHARMACIA BIOTECHNOLOGY GROUP 800 CENTENNIAL AVE. PISCATAWAY NJ 08854 2014578000		QUEUE SYSTEMS INC PO BOX 5366 NORTH BRANCH NJ 08876 3044645400
	SEAPHARM, INC. 791 ALEXANDER RD. PRINCETON NJ 08540 6094527140		UNIGENE LABORATORIES, INC. 110 LITTLE FALLS RD. FAIRFIELD NJ 07006 2018820860
NM	SUMMA MEDICAL CORP. 4272 BALLOON PARK RD, NE ALBUQUERQUE NM 87109 5053458891	NY	AN-CON GENETICS 1 HUNTINGTON QUADRANGLE MELVILLE NY 11747 5166948470
	APPLIED MICROBIOLOGY Brooklyn Navy Yards Bldg5 Brooklyn NY 11205 7188524676		BIONIQUE LABS INC. Bloomingdale Rd RT#3 Saranac Lake NY 12983 5188912356
	BIOTECHNOLOGY GENERAL CORP. 375 Park Ave. New York NY 10152 2123198944		BRAIN RESEARCH INC. 46 E 91 ST NEW YORK NY 10028 2128316645
	CHARLES 688 MAIN ST. BUFFALO NY 14202 7168426270		DIAGNOSTIC TECHNOLOGY, INC. 240 VANDRBILT MOTOR PKWY. HAUPPAUGE NY 11788 5165824949
	ENZO BIOCHEM, INC. 325 HUDSON ST. NEW YORK NY 10013 2127413838		EXO VIR, INC. 111 GREAT NECK RD. SU 607 GREAT NECK NY 11021 5164662110
	GENETIC DIAGNOSTICS CORP. 160 COMMUNITY DR. GREAT NECK NY 11021 5164874711		INTRA GENE INTERNATIONAL INC. 987 ELLIOTT DR LEWISTON NY 14092 7162973658

STATE	COMPANY NAME	STATE	COMPANY NAME
NY	LIFECODES CORP. 4 WESTCHESTER PLAZA ELMSFORD NY 10523 9145924122	NY	NUCLEAR & GENETIC TECHNOLOGY 172 BROOK AVE DEER PARK NY 11729 5162429800
NY	NYGENE CORP. ONE ODELL PLAZA YONKERS NY 10701 9149648300	NY	ONCOGENE SCIENCE, INC 222 STATION PLACE N., ROOM 301 MINEOLA NY 11501 5168772882
NY	PRAXIS BIOLOGICS 30 CORPORATE WOODS, STE300 ROCHESTER NY 14623 7162727000	NY	UNITED BIOMEDICAL INC 2 NEVADA DRIVE LAKE SUCCESS NY 11042 5163541060
OH	AGRIGENETICS CORPORATION 29400 LAKELAND BLVD WICKLIFFE OH 44092 2169434200	OH	ENZYME TECHNOLOGY CORP. 783 US 250 E., RTE.2 ASHLAND OH 44805 4192893706
OH	NORTH COAST BIOTECHNOLOGY INC 19701 S MILES RD WARENSVILLE HT OH 44128 2165870000	OH	RICERCA, INC 7528 AUBURN RD, BOX 100 PAINESVILLE OH 44077 2163573000
OH	UNITED STATES BIOCHEMICAL CORP 26111 MILES RD. CLEVELAND OH 44128 2167655000	OR	AMERICAN BIOCLINICAL 4432 S.E. 16th Ave. Portland OR 97202 8005473686
OR	ANTIVIRALS, INC 249 SW AVERY CORVALLIS OR 97333 5037533133	OR	BEND RESEARCH, INCORPORATED 64550 RESEARCH ROAD BEND OR 97701 5033824100
OR	BENTECH LABORATORIES 635 WATER AVE EAST ALBANY OR 97321 5039289004	OR	EPITOPE, INC. 15425-E SOUTHWEST KOLL PKWY BEAVERTON OR 97006 5036416115
PA	BIOCHEM TECHNOLOGY INC 66 GREAT VALLEY PKWY MALVERN PA 19355 2156478610	PA	BIOLOGICAL ENERGY CORP. PO 766, 2650 EISENHOWER AVE VALLEY FORGE PA 19482 2156309630
PA	BIOSCIENCE MANAGEMENT INC. BFTC-South Mountain Dr. Bethlehem PA 18015 2158610291	PA	CENTOCOR 244 GREAT Valley Pkw Malvern PA 19355 2152964488

STATE	COMPANY NAME	STATE	COMPANY NAME
PA	CYTOX CORPORATION 954 MARCON BLVD ALLENTOWN PA 18103 2152648740	MS	JACKSON IMMUNORESEARCH LAB 872 BALTIMORE PIKE WEST GROVE PA 19390 8003675296
RI	SCOTT LABORATORIES 771 MAIN ST FISKVILLE RI 40182 8005566480	SC	AMTRON 701 EAST BAY ST. CHARLESTON SC 29403 8035772931
TN	BIO THERAPEUTICS, INC. Riverside Drive Franklin TN 37064 6157944797	TX	BETHYL LABS INC. PO BOX 850 Montgomery TX 77356 4095976111
	BIOTICS RESEARCH CORPORATION 4850 WRIGHT RD, SUITE 150 STAFFORD TX 77047 7137899020		GAMMA BIOLOGICALS, INC. 3700 MANGUM RD. HOUSTON TX 77092 8002315655
	GRANADA GENETICS CORP. 10900 RICHMOND AVE PO42298HOUSTON TX 77242 7137831310		HOUSTON BIOTECH 3606 RESEARCH FOREST DR THE WOODLANDS TX 77380 7133630999
	IMMUNO MODULATORS LABS. INC 10521 CORPORATE DRIVE STAFFORD TX 77477 7132409595		KALLESTAD LABORATORIES 1120 CAPITAL OF TEXAS HWY, SO. AUSTIN TX 78746 5123295555
	MONOCLONETICS INTERNAT'L, INC. 18333 EGRET BAY BLVD, STE 270 HOUSTON TX 77058 7133351611		O.C.S. LABS BOX 2868 DENTON TX 76202 8175659998
UT	BIOMATERIALS INTERNATIONAL, INC PO 8852, 420 CHIPETA WAY, STE160 SALT LAKE CITY UT 84108 8015838444		HYCLONE LABORATORIES 1725 S. STATE HIGHWAY 8991 LOGAN UT 84321 8017534584
NPI	417 WAKARA WAY SALT LAKE CITY UT 84108 8015820144	VA	FLOW LABORATORIES, INC. 7655 OLD SPRING HOUSE RD. MCLEAN VA 22102 7038935925
	HAZLETON BIOTECHNOLOGIES GRP 9200 LEESBURG TURNPIKE VIENNA VA 22180 7038935400		INTERLEUKIN-2 413 N. WASHINGTON ST. ALEXANDRIA VA 22313 7035495293

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VA	MELOY LABORATORIES, INC. 6715 ELECTRONIC DR. SPRINGFIELD VA 22151 7033542600	WA	BIO TECHNIQUES LABS., INC. 15555 NE 33 ST, BIOTECH RD Redmond WA 98052 2068839518
	BIOCONTROL SYSTEMS 21414 68th AV. SOUTH Kent WA 98032 2068728500		BIOMED RESEARCH LABS INC 1115 E. Pike St. Seattle WA 98122 2063240380
	CYANOTECH CORPORATION 18748 142ND AVE., N.E. WOODINVILLE, WA 98072 2064812173		GENETIC SYSTEMS CORP. 3005 FIRST AV SEATTLE WA 98121 2067284900
	IMMUNEX CORP. 51 UNIVERSITY ST. SEATTLE WA 98101 2065870430		IMRE CORP 130 FIFTH AVE. NORTH SEATTLE WA 98109 2064481000
	NEORX CORP. 410 W. HARRISON ST. SEATTLE WA 98119 2062817001		R & A PLANT/SOIL INC. 24 PASCO KAHLOTUS RD PASCO WA 99301 5095456867
	ZYMOGENETICS, INC. 2121 N. 35TH ST. SEATTLE WA 98103 2066324036	WI	AGRACETUS 8520 Universtiy Ave Middleton WI 53562 6088367300
	BIO-TECHNICAL RESOURCES, INC. 1035 SOUTH 7TH ST. MANITOWOC WI 54220 4146645518		INCELL CORPORATION 1600 WEST CORNELL MILWAUKEE WI 53209 4142634111
	PROMEGA BIOTECH 2800 SOUTH FISH HATCHERY RD. MADISON WI 53711 6082744330	WV	ALLELIC BIOSYSTEMS RT.1, BOX 230 KEARNEYSVILLE WV 25430 3047255255

FIN/REV/BUD DATA: SORT BY COMPANY NAME

Company Name	fin.	empl.	class	size	finan.	exp.revs.	%BT	REVS	%int	R&Dbud.	%BT	BUDGET	BUDGET/	R&Dbud/	RD BUD/	EX REV/
					(MM)	(\$MM)		FROM BT		\$M		--BT(\$M)	TOT FIN%	EX.REVS.%	EMPL.(\$M)	EMPL.(\$M)
A/G TECHNOLOGY CORP.	PRI	8	E	S	0.25	0.65	40	0.26	2	200	50	100	80	30.8	25.00	91.25
ADVANCED BIOTECHNOLOGIES	PRI	17	G	S		3	99	2.97	0							176.47
ADVANCED MAGNETICS, INC.	PUB	30	K	M	12	5	90	4.50	10	2000	99	1980	16.7	40.0	66.67	166.67
ADVANCED MINERAL TECHNOLOG	PRI	14	R	S							75					
AGDIA, INC.	PRI	8	B	S							90					
AGRACETUS	PRI	65	B	MJV	18.2	0.4			99	7000	99	6930	38.5	1750.0	107.69	6.15
AGRI-DIAGNOSTICS ASSOCIATES	PRI	72	K	SJ												
AGRITECH SYSTEMS, INC	PRI	70	K	M	12	10	99	9.90	0	2500	99	2475	20.8	25.0	35.71	142.86
ALPHA I BIOMEDICALS	PUB	9	P	S	6	1.4	99	1.39		700	99	693	11.7	50.0	77.78	155.56
AMERICAN BIOGENETICS CORP	PRI	10	I	S	1.2	0.485	95	0.46	5	480	99	475.2	40.0	99.0	48.00	48.50
AMERICAN BIOTECHNOLOGY CO	PRI	5	P	S	0.1				0	163	99	161.37	163.0		32.60	
AMERICAN DIAGNOSTICA, INC.	PRI	9	K	S		2	99	1.98		300	99	297		15.0	33.33	222.22
AMERICAN LABORATORIES, INC	PRI	26	P	M												
AMGEN	PUB	215	P	L	105	30.5	85	25.93	15	29500	99	29205	28.1	96.7	137.21	141.86
AMTRON	PRI	16	V	S	2	3	99	2.97		1500	5	75	75.0	50.0	93.75	187.50
ANGENICS	PRI	50	K	M	11	4	99	3.96	0	1700	25	425	15.5	42.5	34.00	80.00
ANTIVIRALS, INC	PRI	6	K	S	0.4					250			62.5		41.67	
APPLIED PROTEIN TECHNOL. INC	PRI	5	F	S	1											
AUTOMEDIX SCIENCES, INC	PRI	6	P	S	0.75											
BALL BIOTECH COMPANY	PRI	25	O	M	2.5	0.3	99	0.30	0	250	99	247.5	10.0	83.3	10.00	12.00
BENTECH LABORATORIES	PRI	7	B	S	0.8	0.75	95	0.71	5	40	99	39.6	5.0	5.3	5.71	107.14
BERKELEY ANTIBODY	PRI	20	S	S		0.75	90	0.68	1	10	99	9.9		1.3	0.50	37.50
BETHYL LABS INC.	PRI	8	S	S		0.4	99	0.40	0							50.00
BINAX, INC	PRI	12	K	S	0.45	1.5	99	1.49		150	99	148.5	33.3	10.0	12.50	125.00
BIO-TECHNICAL RESOURCES, INC.	PRI	25	F	M	1.5	1.5	99	1.49	3	1500	99	1485	100.0	100.0	60.00	60.00
BIOCHEM TECHNOLOGY INC	PRI	10	D	S	3.2		99									
BIOGEN	PUB	360	P	L	40.8	16	99	17.82	25	7000	99	6930	17.2	38.9	19.44	50.00
BIOGENEX LABORATORIES	PRI	30	K	M			95		5							
BIOLOGICS CORP	SUB	85	V	MU		12	10	1.20		1000	10	100		8.3	11.76	141.18
BIOMATERIALS INTERNATIONAL	PRI	15	D	S	1.3	0.524	74	0.39	0	400	90	360	30.8	76.3	26.67	34.93
BIOMATRX, INC.	PRI		W	M	3											
BIOMEDICAL TECHNOLOGIES	PRI	7	J	S		5			8							
BIONIQUE LABS INC.	PRI	9	H	S	0.3	0.6	90	0.54	1	200	99	198	66.7	33.3	22.22	66.67
BIOPOLYMERS, INC.	PRI	15	S	S	3.1	0.6	84	0.50	16	450	75	337.5	14.5	75.0	30.00	40.00
BIOPROBE INTERNATIONAL, INC.	PRI	15	E	S	1.8	1.4	91	1.27	9	295	99	292.05	16.4	21.1	19.67	93.33
BIOSENCE MANAGEMENT INC.	PRI	8	J	S		0.6	99	0.59								
BIOSPHERICS	PUB	250	S	L	3	10	10	1.00	1	4000	99	3960	133.3	40.0	16.00	40.00
BIOTAR MEDICAL PRODUCTS, INC.	PRI	30	K	M	6.5	2.6	80	2.08	3							
BIOTECHNICA INTERNATIONAL	PUB	145	B	L	45	6	99	5.94	0	4000	99	3960	8.9	66.7	27.59	86.67
BIOTECHNOLOGY DEVELOPMENT	C	35	F	M	6	3			10	400			6.7	13.3	11.43	41.38
BIOTHERAPEUTICS, INC.	PUB	120	P	L	40	5	90	4.50	19	5000	80	4000	12.5	100.0	41.67	41.67
CALGENE, INC.	PUB	165	B	M	0.05	20	33	6.60	10	7500	99	7425	37.5	37.5	45.45	121.21
CALIFORNIA BIOTECHNOLOGY INC	PUE	155	P	L	96.7	0.18	64	0.12	36		12	11.88	100.0	6.7	0.08	1.16
CALIFORNIA INTEGRATED DIAGNOS	SUB	17	K	SU	1	0.4	99	0.40		1000	99	990		250.0	58.82	23.53
CALZYME LABORATORIES, INC.	PRI	10	J	S		2	99	1.98								200.00
CAMBRIDGE BIOSCIENCE CORP.	PUB	55	K	M		5	80	4.00	20	3000	80	2400		60.0	54.55	90.91

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FIN/REV/BUD DATA: SORT BY COMPANY NAME

Company Name	fin. empl.	class	size	finan.	exp.revs.	%BT	REVS	%int	R&Dbud.	%BT	BUDGET	BUDGET/	R&DBUD/	R&DBUD/	EX REV/
				(MM)	(\$MM)		FROM BT	\$M			--BT(\$M)	TOT FIN%	EX REVS.%	EMPL(\$M)	EMPL(\$M)
CENTOCOR	PUB 246	P	L		38	71	26.98	14	18000	99	17820	47.4	73.17	154.47	
CETUS CORPORATION	PUE 675	P	L	320	50	80	40.00	20	45000	99	44550	14.1	90.3	66.67	74.07
CEMICON INTERNATIONAL, INC	PRI 8	G	S		1.5	90	1.35	0	250	99	247.5	16.7	31.25	187.50	
CHIRON CORPORATION	PUB 220	P	L	75	11.2	99	11.09	0	13000	99	12870	17.3	116.1	59.09	50.91
COLLAGEN CORPORATION	PUB 225	S	L	20	25	99	24.75	0	6800	99	6732	34.0	27.2	30.22	111.11
COORS BIOTECH PRODUCTS CO.	SUB 185	M	LU		37	15	5.55	0	2500	99	2475	6.8	13.51	200.00	
COVALENT TECHNOLOGY CORP.	SUB 16	K	S	1.4						99					
CROP GENETICS INTERNATIONAL	PRI 49	B	M	5.4	2.5	99	1.98	17	440	99	435.6	8.1	22.0	19.13	51.02
CYANOTECH CORPORATION	PRI 23	M	M	5.4	2	99			700	99		70.0	46.67	86.96	
CYGNUS RESEARCH CORP.	PRI 15	S	S	1	3	99	2.97	0	800	99	792	16.0	11.43	42.86	
DIAGNOSIS CORP.	PUE 70	A	M	5	36	98	35.28	2	5400	99	5346	38.6	15.0	20.00	133.33
DIAGNOSTIC PRODUCTS, CORP.	PUE 270	G	L	14	1.9	99	1.88	0	350	99	346.5	23.3	18.4	11.67	63.33
DIAMEDIX, INC.	PRI 30	K	M	1.5					14000	99	13860	100.0		172.84	
DNAX	PUB 81	P	MU	14						99					
E-Y LABORATORIES, INC	PRI 20	S	S				30.75			70					170.83
ELECTRO-NUCLEONICS, INC.	PUB 720	K	L	49	123	25			1200	15	180	34.3	70.59	26.45	
EMBEX, INC.	PRI 17	A	S	3.5					4100	95	2375	4.5	19.2	22.73	118.18
ENDOTRONICS, INC.	PUB 155	F	L	55	13	46	5.98	23	2500	99					
ENZO BIOCHEM, INC.	PUB 110	K	L						600	90	540	15.0	30.0	28.57	95.24
ENTZYME TECHNOLOGY CORP.	SUB 26	O	MU	4	2	55	1.10	5	511	40	204.4	10.2		102.20	
EPITOPE, INC.	PUE 21	G	M	5						99					
EXOVIR, INC.	PUE 5	P	S	16.95					5	99					
GEN-PROBE, INC.	PRI 113	K	M	40	10	99	9.90	5	10000	99	9900	25.0	100.0	100.00	
GENENCOR, INC.	PRI 29	K	M						1500	40	600			51.72	
GENESIS LABS, INC.	PUE 17	K	S		1	99	0.99	0		99		111.1	25.0	21.62	58.82
GENETIC DIAGNOSTICS CORP.	PUB 185	P	L	3.6	16	50	8.00	6	4000	99	3960			86.49	
GENZYME CORP.	PRI 11	S	S							99					
GLEN MILLS, INC.	PRI 107	F	MJ	5	9.7	99	9.60	0	287	99	284.13	5.7	3.0	2.68	90.65
HYCLONE LABORATORIES	PRI 107	H	L						850	99				28.33	
IGENE BIOTECHNOLOGY INC.	PUB 30	M	M		2.5	99	2.48	1	800	70	560	3.8	32.0	47.06	147.06
IMMUCEL CORPORATION	PRI 17	A	S	21	14	65	9.10	35	9500	99	9405	11.7	67.9	62.09	91.50
IMMUNEX CORP.	PUB 153	P	L	81.4	7.2	2.8	2.77	28	700	99	693	9.7	25.0	28.00	112.00
IMMUNO MODULATORS LABS. INC.	PRI 25	P	M							99					
IMMUNOMED	PRI 17	Q	S	14	5	99	4.95	8	4000	99	3960	20.0	80.0	72.73	90.91
IMMUNOMEDICS, INC.	PUB 55	P	M	20	1.3	99	1.29		120	99	118.8	14.3	9.2	8.00	86.67
IMMUNOTECH CORP.	PRI 15	K	S	0.84	10	22	0.44	1	2000	2	40	20.0	9.1	80.00	880.00
INFERGENE COMPANY	PUB 25	S	M	10	2.7	72	1.94	28	5000	99	4950	25.0	185.2	76.92	41.54
INGENIE, INC.	PUB 65	P	M	20	0.2				500	40	200	25.0	250.0	62.50	25.00
INTEGRATED CHEMICAL SENSORS	PRI 8	D	S	47	18	90	16.20	10	20000	99	19800	42.6	111.1	100.00	90.00
INTEGRATED GENETICS, INC.	PUE 200	P	L	3.8	8	99	7.92	0	1400	99	1386	36.8	17.5	28.57	163.27
INTELLI-GENETICS	PRI 49	S	M		0.075	95	0.07	5	30	99	29.7		40.0	3.33	8.33
INTER-CELL TECHNOLOGIES, INC.	PRI 9	S	S						5000	99	4950	19.2	100.0	56.00	56.00
INTERFERON SCIENCES, INC.	PRI 70	P	M	16	2.8	99	2.77	0	2800	99	2772	17.5	3.3	3.13	93.75
INTERNT'L PLANT RESEARCH INST.	PRI 50	B	M		1.5	99	1.49	2	50	99	49.5	5.0			
JACKSON IMMUNORESEARCH	LAIPRI 16	G	S	1						99					

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Company Name	fin.	empl.	class	size	finan.	expva.	%BT	REVS	%Int	R&Dbud.	%BT	BUDGET	BUDGET/	R&DBUD/	RD BUD/	EX REV/
					(MM)	(\$MM)		FROM BT	\$M			--BT(\$M)	TOT FIN%	EX REVS.%	EMPL(\$M)	EMPL(\$M)
KALLESTAD LABORATORIES	PRI	330	K	L												
LIFECODES CORP.	PRI	53	K	M			1.5	90	1.35	0	1500	99	1485	100.0	28.30	28.30
LUCKY BIOTECH CORP.	SUB	4	P	SU	2		0.9	99	0.89	0	1500	99	1485	166.7	375.00	225.00
MARICULTURA, INC.	PRI	7	T	S												
MELOY LABORATORIES, INC.	SUB	246	W	LU			2	99	1.98	0	9500	99	9405	475.0	38.62	8.13
MICROBIO RESOURCES	PRI	39	J	M	8				0.00	500	60	300		12.82		
MICROGENICS	PRI	70	K	M	9.2		6	33	1.98	5	4000	25	1000	66.7	57.14	85.71
MOLECULAR DIAGNOSTICS, INC.	SUB	30	K	M	17		3.5	99	3.47	0	3500	99	3465	100.0	116.67	116.67
MOLECULAR GENETIC RESOURCES	PRI	5	G	S			0.3	99	0.30						60.00	60.00
MOLECULAR GENETICS, INC.	PUB	125	A	L	36		9.5	75	7.13	25	5000	99	4950	52.6	40.00	76.00
MONOCLONAL ANTIBODIES, INC.	PUB	136	K	L	29.8		9	92	8.28	8	2000	99	1980	22.2	14.71	66.18
MONOCLONAL ANTIBODIES, INC.	PRI	5	G	S			0.4	99	0.40	0	500	99	495	125.0	100.00	80.00
MULTIPLE PEPTIDE SYSTEMS INC	PRI	2	F	S			0.12	99	0.12						60.00	60.00
MUREX CORP.	PRI	180	K	L	6.6		9.5	40	3.80	5	5450	75	4087.5	57.4	30.28	52.78
MYCOSEARCH, INC.	PRI	4	H	S	0.01		0.25	99	0.25	0	150	99	148.5	60.0	37.50	62.50
NEORX CORP.	PRI	100	P	M	18		6	95	5.70	5	6000	99	5940	100.0	60.00	60.00
NEUSHUL MARICULTURE	PRI	6	T	S	0.15		0.25	99	0.25	10	200			80.0	33.33	41.67
NORTH COAST BIOTECHNOLOGY	PRI	2	P	S	0.05				0.00	50	99	49.5		25.00		
NPI	PUE	625	B	L			25	15	3.75	5	5000	75	3750	20.0	8.00	40.00
NYCENE CORP.	PRI	16	F	S			0.375	99	0.37						20.83	20.83
PHARMATEC, INC.	PRI	25	P	M	4.5		2	95	1.90	5	1500	99	1485	33.3	60.00	80.00
PHYTOGEN	PRI	20	B	S	5		0.5	99	0.50	0	800	99	792	16.0	40.00	25.00
PLANT GENETICS, INC.	PRI	63	B	M			6.05	25	1.51	2	2100	75	1575	34.7	33.33	96.03
QUEUE SYSTEMS INC	PRI	85	F	M	12		8	99	7.92	0	500	99	495	4.2	5.88	94.12
QUIDEL	PRI	325	P	L	35		15	99	14.85	10	5000	99	4950	33.3	15.38	46.15
R & A PLANT/SOIL INC.	PRI	6	T	S			0.6	99	0.59	100	99	99		16.7	16.67	100.00
RECOMTEX CORP.	PRI	12	K	S	1.2		0.2	99	0.20	1	200	99	198	100.0	16.67	16.67
RIBI IMMUNOCHEM RESEARCH, INC	PUE	35	P	M	17		1.9	60	1.14	40	1700	99	1683	89.5	48.57	54.29
RICERCA, INC.	SUB	160	S	LU												
SEPRACOR, INC.	PRI	40	B	M	15		2.5		3.60	5	4000	75	3000	160.0	100.00	62.50
STRATAGENE CLONING SYSTEMS	PRI	40	G	M			4	90	3.60	10	1000	99	990	25.0	25.00	100.00
SYNBIOTICS CORP.	PUE	89	K	M	17		4	80	3.20	5	4000	70	2800	100.0	44.94	44.94
SYNTRO CORP.	PUB	84	A	M	34.75		6	85	5.10	15	4500	99	4455	75.0	53.57	71.43
SYVA CO	SUB	1000	K	LU			100				20000	10	2000	20.0	20.00	100.00
T-CELL SCIENCES	PUB	49	P	M	13.8		2	65	1.30	35	2000	99	1980	100.0	40.82	40.82
TRANSFORMATION RESEARCH INC	PRI	4	X	S			0.25	99	0.25	100				40.0	25.00	62.50
TRITON BIOSCIENCES, INC.	SUB	140	P	LU	69		3	99	2.97	0	31000	85	26350	1033.3	221.43	21.43
UNIGENE LABORATORIES, INC.	PRI	30	P	M	4		3	95	2.85	5	2500	99	2475	62.5	83.33	100.00
UNITED AGRISEEDS INC	PRI	192	B	L	21		33.6		4.80	4	4900	35	1715	23.3	25.52	175.00
UNIVERSITY GENETICS CO.	PUB	100	A	M	9		5	96	4.80	4	200	99	198	2.2	4.0	50.00
VERAX CORP.	PRI	80	O	M	10		3		1.39	0	3000	99	2970	100.0	37.50	37.50
WESTBRIDGE RESEARCH GROUP	PPI	15	J	S	9		1.4	99			250	99	247.5	17.9	16.67	93.33
WZOECON CORP./SANDOZ CROP PRO	SUB	130	B	LU			100			0	13000	35	4550	13.0	100.00	769.23
ZYMED LABORATORIES, INC.	PRI	20	G	S												
ZYMOGENETICS, INC.	PRI	95	P	M	7.5		6	95	5.70	5	2000	99	1980	26.7	21.05	63.16

Company Name	fin. pri.	empl.	class	size	finan. (MM)	exp. revs. (\$MM)	%BT	REVS FROM BT	%int R&Dbud. \$M	BUDGET --BT(\$M)	BUDGET/ TOT FIN%	R&DBUD/ EX.REVS.%	RD BUD/ EMPL.\$M	EX REV/ EMPL.\$M
AGDIA, INC.	PRI	8	B	S	12	10	99	9.90	0	2475	20.8	25.0	35.71	142.86
AGRITECH SYSTEMS, INC.	PRI	70	K	M	0.1		99		0	161.37	163.0		32.60	
AMERICAN BIOTECHNOLOGY CO	PRI	5	P	S	1									
APPLIED PROTEIN TECHNOLOG. INC.	PRI	5	F	S										
BETHYL LABS INC.	PRI	8	S	S		0.4	99	0.40	0	1485	100.0	100.0	60.00	50.00
BIO-TECHNICAL RESOURCES, INC.	PRI	25	F	M	1.5	1.5	99	1.49	3					60.00
BIOSTAR MEDICAL PRODUCTS, INC.	PRI	30	K	M	6.5	2.6	80	2.08	3	346.5	23.3	18.4	11.67	86.67
DIAMEDIX, INC.	PRI	30	K	M	1.5	1.9	99	1.88	0					63.33
EMBEX, INC.	PRI	17	A	S	3.5		95	0.07	5	180	34.3	40.0	70.59	8.33
INTER-CELL TECHNOLOGIES, INC.	PRI	9	S	S	0.05	0.075	99	0.37	50	29.7	100.0		25.00	20.83
NORTH COAST BIOTECHNOLOGY IN	PRI	2	P	S						49.5				
NYGENE CORP.	PRI	18	F	S		0.375	99		5000	4950	19.2		71.43	
INTERFERON SCIENCES, INC.	PRI	70	P	M	26		99	9.90	5	9900	25.0	100.0	100.00	100.00
GENENCOR, INC.	PRI	100	J	MJV	40	10	99	0.25	10		133.3	80.0	33.33	41.67
NEUSHUL MARICULTURE	PRI	6	T	S	0.15	0.25	99		5					
GEN-PROBE, INC.	PRI	113	K	M	16.95		95			175	46.7		58.33	
AUTOMEDIX SCIENCES, INC.	PRI	6	P	S	0.75		99	1.49	350	148.5	33.3	10.0	12.50	125.00
BINAX, INC.	PRI	12	K	S	0.45	1.5	99	5.70	5	5940	33.3	100.0	60.00	60.00
NEORX CORP.	PRI	100	P	M	18	6	95		6000	6930	38.5	1750.0	107.69	6.15
AGRACETUS	PRI	65	B	MJV	18.2	0.4	99	14.85	10	4950	14.3	33.3	15.38	46.15
QUIDEL	PRI	325	P	L	35	15	90	1.35	0	1485	62.5	100.0	28.30	28.30
LIFECODES CORP.	PRI	53	K	M		1.5			250				41.67	56.00
ANTIVIRALS, INC.	PRI	6	K	S	0.4		99	2.77	0	2772	17.5	100.0	56.00	62.50
INTERN'TL PLANT RESEARCH INST.	PRI	50	B	M	16	2.8	99		5	3000	26.7	160.0	100.00	
SEPRACOR, INC.	PRI	40	B	M	15	2.5					70.0		46.67	
CYGNUS RESEARCH CORP.	PRI	15	S	S	1		99		700					
HP GENENCHEM	PRI	17	Q	S	14					475.2	40.0	99.0	48.00	48.50
IMMUNOMED	PRI	10	I	S	1.2	0.485	95	0.46	5	39.6	5.0	5.3	5.71	107.14
AMERICAN BIOGENETICS CORP	PRI	7	B	S	0.8	0.75	95	0.71	5					
BENTECH LABORATORIES	PRI	10	D	S	3.2		99		5					
BIOCHEM TECHNOLOGY INC	PRI	30	K	M			95		8					
BIOGENEX LABORATORIES	PRI	7	J	S			5		16	337.5	14.5	75.0	30.00	40.00
BIOMEDICAL TECHNOLOGIES	PRI	15	S	S	3.1	0.6	84	0.50	16					75.00
BIOPOLYMERS, INC.	PRI	8	J	S		0.6	99	0.59		560	3.8	32.0	47.06	147.06
BIOSCIENCE MANAGEMENT INC.	PRI	17	A	S	21	2.5	99	2.48	1	1386	36.8	17.5	28.57	163.27
IMMUCELL CORPORATION	PRI	49	S	M	3.8	1.5	99	7.92	0	49.5	5.0	3.3	3.13	93.75
INTELLI-GENETICS	PRI	16	G	S	1	0.3	99	0.30	2					60.00
JACKSON IMMUNORESEARCH LAI	PRI	5	G	S		0.12	99	0.12	0	792	16.0	160.0	40.00	25.00
MOLECULAR GENETIC RESOURCES	PRI	2	F	S	5	0.5	99	0.50	0					
MULTIPLE PEPTIDE SYSTEMS INC	PRI	20	B	S										
PHYTOGEN	PRI													

Company Name	fin.	empl.	class	size	finan.	exp.	%BT	REVS	%Int	R&Dbud.	%BT	BUDGET	BUDGET/	R&DBUD/	RD BUD/	EX REV/
					(MM)	(\$MM)		FROM BT	\$M			--BT(\$M)	TOT FIN%	EX.REVS.%	EMPL.(\$M)	EMPL.(\$M)
RECOMTEX CORP.	PRI:	12	K	S	1.2	0.2	99	0.20	1	200	99	198	16.7	100.0	16.67	16.67
ZYMED LABORATORIES, INC.	PRI:	20	G	S												
QUEUE SYSTEMS INC	PRI:	85	F	M	12	8	99	7.92	0	500	99	495	4.2	6.3	5.88	94.12
PHARMATEC, INC	PRI:	25	P	M	4.5	2	95	1.90	5	1500	99	1485	33.3	75.0	60.00	80.00
UNITED AGRISEEDS INC	PRI:	192	B	L	21	33.6			0	4900	35	1715	23.3	14.6	25.52	175.00
BIONIQUE LABS INC.	PRI:	9	H	S	0.3	0.6	90	0.54	1	200	99	198	66.7	33.3	22.22	66.67
VERAX CORP.	PRI:	80	O	M	10	3				3000	99	2970	30.0	100.0	37.50	37.50
CYANOTECH CORPORATION	PRI:	23	M	M	5.4	2	99	1.98	17	440	99	435.6	8.1	22.0	19.13	86.96
INTEGRATED CHEMICAL SENSORS	PRI:	8	D	S		0.2				500	40	200		250.0	62.50	25.00
STRATAGENE CLONING SYSTEMS	PRI:	40	G	M		4	90	3.60	10	1000	99	990		25.0	25.00	100.00
UNIGENE LABORATORIES, INC.	PRI:	30	P	M	4	3	95	2.85	5	2500	99	2475	62.5	83.3	83.33	100.00
MUREX CORP.	PRI:	180	K	L	6.6	9.5	40	3.80	5	5450	75	4087.5	82.6	57.4	30.28	52.78
ADVANCED BIOTECHNOLOGIES	PRI:	17	G	S		3	99	2.97	0						176.47	176.47
AMERICAN DIAGNOSTICA, INC.	PRI:	9	K	S		2	99	1.98		300	99	297		15.0	33.33	222.22
AMERICAN LABORATORIES, INC	PRI:	26	P	M												
ANGENICS	PRI:	50	K	M	11	4	99	3.96	0	1700	25	425	15.5	42.5	34.00	80.00
BERKELEY ANTIBODY	PRI:	20	S	S		0.75	90	0.68	1	10	99	9.9		1.3	0.50	37.50
BIOMATRIX, INC.	PRI:		W	M	3											
CALZYME LABORATORIES, INC.	PRI:	10	J	S		2	99	1.98								200.00
CHEMICON INTERNATIONAL, INC	PRI:	8	G	S		1.5	90	1.35	0	250	99	247.5		16.7	31.25	187.50
E-Y LABORATORIES, INC	PRI:	20	S	S												
GLEN MILLS, INC.	PRI:	11	S	S			15		3							
HYCLONE LABORATORIES	PRI:	107	H	L	5	9.7	99	9.60	0	287	99	284.13	5.7	3.0	2.68	90.65
IMMUNO MODULATORS LABS. INC	PRI:	25	P	M	7.2	2.8	99	2.77		700	99	693	9.7	25.0	28.00	112.00
IMMUNOTECH CORP.	PRI:	15	K	S	0.84	1.3	99	1.29		120	99	118.8	14.3	9.2	8.00	86.67
MICROBIO RESOURCES	PRI:	39	J	M	8					500	60	300	6.3		12.82	
MICROGENICS	PRI:	70	K	M	9.2	6	33	1.98	5	4000	25	1000	43.5	66.7	57.14	85.71
MONOCLONETICS INTERNATL, INC	PRI:	5	G	S		0.4	99	0.40	0	500	99	495		125.0	100.00	80.00
MYCOSEARCH, INC.	PRI:	4	H	S	0.01	0.25	99	0.25	0	150	99	148.5	1500.0	60.0	37.50	62.50
PLANT GENETICS, INC.	PRI:	63	B	M		6.05	25	1.51	2	2100	75	1575		34.7	33.33	96.03
R & A PLANT/SOIL INC.	PRI:	6	T	S		0.6	99	0.59		100	99	99		16.7	16.67	100.00
TRANSFORMATION RESEARCH INC	PRI:	4	X	S		0.25	99	0.25		100				40.0	25.00	62.50
WESTBRIDGE RESEARCH GROUP	PRI:	15	J	S	9	1.4	99	1.39	0	250	99	247.5	2.8	17.9	16.67	93.33
ZYMOGENETICS, INC.	PRI:	95	P	M	7.5	6	95	5.70	5	2000	99	1980	26.7	33.3	21.05	63.16
KALLESTAD LABORATORIES	PRI:	330	K	L												
AGRI-DIAGNOSTICS ASSOCIATES	PRI:	22	K	SJ	2.5	0.3	99	0.30	0	250	99	247.5	10.0	83.3	10.00	12.00
BALL BIOTECH COMPANY	PRI:	25	O	M		2.5										51.02
CROP GENETICS INTERNATIONAL	PRI:	49	B	M			40	0.26	2	200	50	100	80	30.8	25.00	81.25
A/G TECHNOLOGY CORP.	PRI:	8	E	S	0.25	0.65										
AMTRON	PRI:	16	V	S	2	3	99	2.97		1500	5	75	75.0	50.0	93.75	187.50
MARICULTURA, INC.	PRI:	7	T	S												

FIN/REV/BUD DATA: SORT BY PRI/PUB/SUB

Company Name	fin. empl.	class	size	finan.	exp.revs.	%BT	REVS	%int	R&Dbud.	%BT	BUDGET	BUDGET/	R&DBUD/	RD BUD/	EX REV/
				(MM)	(\$MM)		FROM BT	\$M			--BT(\$M)	TOT FIN%	EX.REVS.%	EMPL.(\$M)	EMPL.(\$M)
ADVANCED MINERAL TECHNOLOG	14	R	S	1.8	1.4	91	1.27	9	295	75	292.05	16.4	21.1	19.67	93.33
BIOPROBE INTERNATIONAL, INC.	15	E	S	1.3	0.524	74	0.39	0	1500	40	600			51.72	
GENESIS LABS, INC.	29	K	M	40.8	18	99	17.82	25	400	90	360	30.8	76.3	26.67	34.93
BIOMATERIALS INTERNATIONAL	15	D	S	0.05	20	33	6.60	10	7000	99	6930	17.2	38.9	19.44	50.00
BIOMAT	360	P	L	96.7	0.18	64	0.12	36	7500	99	7425		37.5	45.45	121.21
CALGENE, INC.	165	B	M	14	36	98	35.28	2	12	99	11.88		6.7	0.08	1.16
CALIFORNIA BIOTECHNOLOGY INC	155	P	L	47	18	90	16.20	10	5400	99	19800	38.6	15.0	20.00	133.33
DIAGNOSTIC PRODUCTS, CORP.	270	G	L	105	30.5	85	25.93	15	20000	99	29205	42.6	111.1	100.00	90.00
INTEGRATED GENETICS, INC.	200	P	L	20	2.7	72	1.94	28	5000	99	4950		20.0	8.00	40.00
INTEGRATED GENETICS, INC.	625	B	L	45	6	99	5.94	0	5000	75	3750		66.7	27.59	41.38
BIOTECHNICA INTERNATIONAL	145	B	L	12	38	71	26.98	14	4000	99	3960	8.9	47.4	73.17	154.47
CENTOCOR	246	P	L	105	30.5	85	25.93	15	18000	99	17820	16.7	40.0	66.67	166.67
ADVANCED MAGNETICS, INC.	30	K	M	20	2.7	72	1.94	28	2000	99	1980	28.1	96.7	137.21	141.86
AMGEN	215	P	L	13.8	2	65	1.30	35	29500	99	29205	25.0	185.2	76.92	41.54
INGENE, INC.	65	P	M	20	2.7	72	1.94	28	5000	99	4950	14.5	100.0	40.82	40.82
T-CELL SCIENCES	49	P	M	20	2.7	72	1.94	28	2000	99	1980	34.0	27.2	30.22	111.11
COLLAGEN CORPORATION	225	S	L	20	2.7	72	1.94	28	6800	99	6732			26.45	
ENDOTRONICS, INC.	155	F	L						4100					28.33	
IGENE BIOTECHNOLOGY INC.	30	M	M						850						
GENETIC DIAGNOSTICS CORP.	17	K	S	3.6	1	99	0.99	0	4000	99	3960	111.1	25.0	21.62	58.82
GENZYME CORP.	185	P	L	9	16	50	8.00	6	200	99	198	2.2	4.0	2.00	86.49
UNIVERSITY GENETICS CO.	100	A	M	3	5	96	4.80	4	4000	99	3960	133.3	40.0	16.00	50.00
BIOSPHERICS	250	S	L	34.75	6	85	5.10	15	4500	99	4455	12.9	75.0	53.57	40.00
SYNTO CORP.	84	A	M	4	2	55	1.10	5	600	90	540	15.0	30.0	28.57	71.43
EPTOPE, INC.	21	G	M	81.4	14	65	9.10	35	9500	99	9405	11.7	67.9	62.09	95.24
IMMUNEX CORP.	153	P	L	320	50	80	40.00	20	45000	99	44550	14.1	90.0	66.67	91.50
CETUS CORPORATION	675	P	L	10	22	2	0.44	1	2000	2	40	20.0	9.1	80.00	74.07
INFERENCE COMPANY	25	S	M	6	1.4	99	1.39		700	99	693	11.7	50.0	77.78	880.00
ALPHA 1 BIOMEDICALS	9	P	S	17	4	80	3.20	5	4000	70	2800	23.5	100.0	44.94	155.56
SYNBIOTICS CORP.	89	K	M	6	3			10	400			6.7	13.3	11.43	44.94
BIOTECHNOLOGY DEVELOPMENT C	35	F	M	6	3			10	400			12.5	100.0	41.67	85.71
BIOTHERAPEUTICS, INC.	120	P	L	40	5	90	4.50	10	5000	80	4000	6.7	22.2	14.71	41.67
MONOCLONAL ANTIBODIES, INC.	136	K	L	29.8	9	92	8.28	8	2000	99	1980	10.0	89.5	48.57	66.18
RIBI IMMUNOCHEM RESEARCH, INC	35	P	M	17	1.9	60	1.14	40	1700	99	1683	10.2	10.2	102.20	54.29
EXOVIR, INC.	5	P	S	5					511	40	204.4			54.55	90.91
CAMBRIDGE BIOSCIENCE CORP.	55	K	M	14	5	80	4.00	20	3000	80	2400	100.0	60.0	172.84	90.91
DNAX	81	P	MU	55	13	46	5.98	23	14000	99	13860	4.5	19.2	22.73	118.18
ENZO BIOCHEM, INC.	110	K	L	49	123	25	30.75		2500	95	2375			72.73	170.83
ELECTRO-NUCLEONICS, INC.	720	K	L	20	5	99	4.95	8	4000	70	3960	20.0	80.0	72.73	90.91
IMMUNOMEDICS, INC.	55	P	M	36	9.5	75	7.13	25	5000	99	4950	13.9	52.6	40.00	76.00
MOLECULAR GENETICS, INC	125	A	L												

Company Name	fin.	empl.	class	size	finan.	exp.revs.	%BT	REVS	%int	R&Dbud.	%BT	BUDGET	BUDGET/	R&DBUD/	RD BUD/	EX REV/
					(MM)	(\$MM)		FROM BT	\$M			--BT(\$M)	TOT FIN%	EX.REVS.%	EMPL.(\$M)	EMPL(\$M)
DIAGNON CORP.	PUB	70	A	M	5	3	99	2.97	0	800	99	792	16.0	26.7	11.43	42.86
CHIRON CORPORATION	PUB	220	P	L	75	11.2	99	11.09	0	13000	99	12870	17.3	116.1	59.09	50.91
CALIFORNIA INTEGRATED	SUB	17	K	SU	1	0.4	99	0.40		1000	99	990	100.0	250.0	58.82	23.53
BIOLOGICS CORP	SUB	85	V	MU		12	10	1.20		1000	10	100		8.3	11.76	141.18
RICERCA, INC	SUB	160	S	LU												
MOLECULAR DIAGNOSTICS, INC.	SUB	30	K	M	17	3.5	99	3.47	0	3500	99	3465	20.6	100.0	116.67	116.67
SYVA CO	SUB	1000	K	LU		100				20000	10	2000		20.0	20.00	100.00
COORS BIOTECH PRODUCTS CO.	SUB	185	M	LU		37	15	5.55	0	2500	99	2475		6.8	13.51	200.00
ENZYME TECHNOLOGY CORP.	SUB	26	O	MU			99									
COVALENT TECHNOLOGY CORP.	SUB	16	K	S	1.4											
LUCKY BIOTECH CORP.	SUB	4	P	SU	2	0.9	99	0.89	0	1500	99	1485	75.0	166.7	375.00	225.00
MELOY LABORATORIES, INC.	SUB	246	W	LU		2	99	1.98	0	9500	99	9405		475.0	38.62	8.13
ZOECON CORP./SANDOZ CROP	SUB	130	B	LU		100			0	13000	35	4550		13.0	100.00	769.23
TRITON BIOSCIENCES, INC.	SUB	140	P	LU	69	3	99	2.97	0	31000	85	26350	44.9	1033.3	221.43	21.43

FIN/REV/BUD DATA: SORT BY COMPANY SIZE

Company Name	fin.	empl.	class	size	finan.	exp.revs.	%BT	REVS	%int	R&Dbud.	%BT	BUDGET	BUDGET/	R&DBUD/	RD BUD/	EX REV/
					(MM)	(\$MM)		FROM BT	\$M			-\$T(\$M)	TOT FIN%	EX.REVS.%	EMPL(\$M)	EMPL(\$M)
CALIFORNIA INTEGRATED DIAGNOSIS	SUB	17	K	SU	1	0.4	99	0.40	1000	99	99	990	100.0	250.0	58.82	23.53
LUCKY BIOTECH CORP.	SUB	4	P	SU	2	0.9	99	0.89	0	1500	99	1485	75.0	166.7	375.00	225.00
AGRI-DIAGNOSTICS ASSOCIATES	PRI	22	K	SJ												
AGDIA, INC.	PRI	8	B	S	0.1		99		0	163	99	161.37	163.0		32.60	50.00
AMERICAN BIOTECHNOLOGY CO	PRI	5	P	S	1											
APPLIED PROTEIN TECHNOLOG. INC	PRI	5	F	S												
BETHYL LABS INC.	PRI	8	S	S		0.4	99	0.40	0							
EMBEX, INC.	PRI	17	A	S	3.5											
INTER-CELL TECHNOLOGIES, INC.	PRI	9	S	S		0.075	95	0.07	5	30	99	180	34.3	40.0	70.59	8.33
NORTH COAST BIOTECHNOLOGY IN	PRI	2	P	S	0.05					50	99	49.5	100.0		25.00	
NYGENE CORP.	PRI	18	F	S		0.375	99	0.37	10	200	99					20.83
NEUSHUL MARICULTURE	PRI	6	T	S	0.15	0.25	99	0.25						80.0	33.33	41.67
AUTOMEDIX SCIENCES, INC	PRI	6	P	S	0.75					350	50	175	46.7		58.33	
BINAX, INC	PRI	12	K	S	0.45	1.5	99	1.49		150	99	148.5	33.3	10.0	12.50	125.00
ANTIVIRALS, INC	PRI	6	K	S	0.4					250			62.5		41.67	
CYGNUS RESEARCH CORP.	PRI	15	S	S	1					700			70.0		46.67	
IMMUNOMED	PRI	17	Q	S	14											
AMERICAN BIOGENETICS CORP	PRI	10	I	S	1.2	0.485	95	0.46	5	480	99	475.2	40.0	99.0	48.00	48.50
BENTECH LABORATORIES	PRI	7	B	S	0.8	0.75	95	0.71	5	40	99	39.6	5.0	5.3	5.71	107.14
BIOCHEM TECHNOLOGY INC	PRI	10	D	S	3.2											
BIOMEDICAL TECHNOLOGIES	PRI	7	J	S			5		8							
BIOPOLYMERS, INC.	PRI	15	S	S	3.1	0.6	84	0.50	16	450	75	337.5	14.5	75.0	30.00	40.00
BIOSCIENCE MANAGEMENT INC.	PRI	8	J	S		0.6	99	0.59			99					75.00
IMMUCELL CORPORATION	PRI	17	A	S	21	2.5	99	2.48	1	800	70	560	3.8	32.0	47.06	147.06
JACKSON IMMUNORESEARCH LAI	PRI	16	G	S	1	1.5	99	1.49	2	50	99	49.5	5.0	3.3	3.13	93.75
MOLECULAR GENETIC RESOURCES	PRI	5	G	S		0.3	99	0.30								60.00
MULTIPLE PEPTIDE SYSTEMS INC	PRI	2	F	S		0.12	99	0.12								60.00
PHYTOGEN	PRI	20	B	S	5	0.5	99	0.50	0	800	99	792	16.0	160.0	40.00	25.00
RECOMTEX CORP.	PRI	12	K	S	1.2	0.2	99	0.20	1	200	99	198	16.7	100.0	16.67	16.67
ZYMED LABORATORIES, INC.	PRI	20	G	S			90									
BIONIQUE LABS INC.	PRI	9	H	S	0.3	0.6	90	0.54	1	200	99	198	66.7	33.3	22.22	66.67
INTEGRATED CHEMICAL SENSORS	PRI	8	D	S		0.2				500	40	200	250.0	62.50	25.00	25.00
ADVANCED BIOTECHNOLOGIES	PRI	17	G	S		3	99	2.97	0							176.47
AMERICAN DIAGNOSTICA, INC.	PRI	9	K	S		2	99	1.98		300	99	297	15.0	33.33	0.50	222.22
BERKELEY ANTIBODY	PRI	20	S	S		0.75	90	0.68	1	10	99	9.9	1.3		37.50	37.50
CALZYME LABORATORIES, INC.	PRI	10	J	S		2	99	1.98							200.00	
CHEMICON INTERNATIONAL, INC	PRI	8	G	S		1.5	90	1.35	0	250	99	247.5	16.7		31.25	187.50
E-Y LABORATORIES, INC	PRI	20	S	S												
GLEN MILLS, INC.	PRI	11	S	S			15		3							
IMMUNOTECH CORP.	PRI	15	K	S	0.84	1.3	99	1.29		120	99	118.8	14.3	9.2	8.00	86.67
MONOCLONETICS INTERNATL, INC	PRI	5	G	S		0.4	99	0.40	0	500	99	495	125.0		100.00	80.00

Company Name	fin.	empl.	class	size	finan.	exp.revs.	%BT	REVS	FROM BT	%Int	R&Dbud.	%BT	BUDGET	BUDGET/	R&DBUD/	RD BUD/	EX REV/
					(MM)	(\$MM)				\$M			--BT(\$M)	TOT FIN%	EX REVS.%	EMPL(\$M)	EMPL(\$M)
MYCOSEARCH, INC.	PRI	4	H	S	0.01	0.25	99	0.25	99	0	150	99	148.5	1500.0	60.0	37.50	62.50
R & A PLANT/SOIL INC.	PRI	6	T	S		0.6	99	0.59	99		100	99	99		16.7	16.67	100.00
TRANSFORMATION RESEARCH INC	PRI	4	X	S		0.25	99	0.25	99		100				40.0	25.00	62.50
WESTBRIDGE RESEARCH GROUP	PRI	15	J	S	9	1.4	99	1.39	99	0	250	99	247.5	2.8	17.9	16.67	93.33
A/G TECHNOLOGY CORP.	PRI	8	E	S	0.25	0.65	40	0.26	2	2	200	50	100	80	30.8	25.00	81.25
AMTRON	PRI	16	V	S	2		3	2.97	99		1500	5	75	75.0	50.0	93.75	187.50
MARICULTURA, INC.	PRI	7	T	S								75					
ADVANCED MINERAL TECHNOLOG	PRI	14	R	S									292.05	16.4	21.1	19.67	93.33
BIOPROBE INTERNATIONAL, INC.	PRI	15	E	S	1.8	1.4	91	1.27	9	9	295	99	360	30.8	76.3	26.67	34.93
BIOMATERIALS INTERNATIONAL,IP	PRI	15	D	S	1.3	0.524	74	0.39	0	0	400	90					58.82
GENETIC DIAGNOSTICS CORP.	PUB	17	K	S		1	99	0.99	0								
ALPHA I BIOMEDICALS	PUB	9	P	S	6	1.4	99	1.39			700	99	693	11.7	50.0	77.78	155.56
EXOVIIR, INC.	PUB	5	P	S	5						511	40	204.4	10.2		102.20	
COVALENT TECHNOLOGY CORP.	SUB	16	K	S	1.4						14000	99	13860	100.0		172.84	141.18
DNAX	PUB	81	P	MU	14			1.20			1000	10	100		8.3	11.76	
BIOLOGICS CORP	SUB	85	V	MU						0							
ENZYME TECHNOLOGY CORP.	SUB	26	O	MU				9.90		5	10000	99	9900	25.0	100.0	100.00	100.00
GENECOR, INC.	PRI	100	J	MJV	40					99	7000	99	6930	38.5	1750.0	107.69	6.15
AGRACETUS	PRI	65	B	MJV	18.2	0.4											
HP GENECHEM	PRI		F	MJ													
AGRITECT SYSTEMS, INC	PRI	70	K	M	12	10	99	9.90	0	0	2500	99	2475	20.8	25.0	35.71	142.86
BIO-TECHNICAL RESOURCES, INC.	PRI	25	F	M	1.5	1.5	99	1.49	3	3	1500	99	1485	100.0	100.0	60.00	60.00
BIOSTAR MEDICAL PRODUCTS, INC.	PRI	30	K	M	6.5	2.6	80	2.08	3								86.67
DIAMEDIX, INC.	PRI	30	K	M	1.5	1.9	99	1.88	0	0	350	99	346.5	23.3	18.4	11.67	63.33
INTERFERON SCIENCES, INC.	PRI	70	P	M	26						5000	99	4950	19.2		71.43	
GEN-PROBE, INC.	PRI	113	K	M	16.95		95			5							
NEORX CORP.	PRI	100	P	M	18	6	95	5.70	5	5	6000	99	5940	33.3	100.0	60.00	60.00
LIFECODES CORP.	PRI	53	K	M		1.5	90	1.35	0		1500	99	1485		100.0	28.30	28.30
INTERN'L PLANT RESEARCH INST.	PRI	50	B	M	16	2.8	99	2.77	0	0	2800	99	2772	17.5	100.0	56.00	56.00
SEPRACOR, INC.	PRI	40	B	M	15	2.5				5	4000	75	3000	26.7	160.0	100.00	62.50
BIOCENEX LABORATORIES	PRI	30	K	M			95			5							
INTELLI-GENETICS	PRI	49	S	M	3.8	8	99	7.92	0	0	1400	99	1386	36.8	17.5	28.57	163.27
QUELUE SYSTEMS INC	PRI	85	F	M	12	8	99	7.92	0	0	500	99	495	4.2	6.3	5.88	94.12
PHARMATEC, INC	PRI	25	P	M	4.5	2	95	1.90	5	5	1500	99	1485	33.3	75.0	60.00	80.00
VERAX CORP.	PRI	80	O	M	10	3					3000	99	2970	30.0	100.0	37.50	37.50
CYANOTECH CORPORATION	PRI	23	M	M	5.4	2	99	1.98	17	17	440	99	435.6	8.1	22.0	19.13	86.96
STRATAGENE CLONING SYSTEMS	PRI	40	G	M		4	90	3.60	10	10	1000	99	990		25.0	25.00	100.00
UNIGENE LABORATORIES, INC	PRI	30	P	M	4	3	95	2.85	5	5	2500	99	2475	62.5	83.3	83.33	100.00
AMERICAN LABORATORIES, INC	PRI	26	P	M													
ANGENICS	PRI	50	K	M	11	4	99	3.96	0	0	1700	25	425	15.5	42.5	34.00	80.00
BIOMATRIX, INC.	PRI		W	M	3												

Company Name	fin. empl.	class	size	finan.	exp.revs.	%BT	REVS	%int	R&Dbud.	%BT	BUDGET	BUDGET/	R&DBUD/	RD BUD/	EX REV/
				(MM)	(\$MM)		FROM BT	\$M			--BT(\$M)	TOT FIN%	EX REVS.%	EMPL.(\$M)	EMPL.(\$M)
IMMUNO MODULATORS LABS, INC	PRI ¹	25	P	7.2	2.8	99	2.77		700	99	693	9.7	25.0	28.00	112.00
MICROBIO RESOURCES	PRI ¹	39	J	8					500	60	300	6.3		12.82	
MICROGENICS	PRI ¹	70	K	9.2	6	33	1.98	5	4000	25	1000	43.5	66.7	57.14	85.71
PLANT GENETICS, INC.	PRI ¹	63	B		6.05	25	1.51	2	2100	75	1575		34.7	33.33	96.03
ZYMOGENETICS, INC.	PRI ¹	95	P	7.5	6	95	5.70	5	2000	99	1980	26.7	33.3	21.05	63.16
BALL BIOTECH COMPANY	PRI ¹	25	O	2.5	0.3	99	0.30	0	250	99	247.5	10.0	83.3	10.00	12.00
CROP GENETICS INTERNATIONAL	PRI ¹	49	B		2.5				1500	40	600			51.72	51.02
GENESIS LABS, INC.	PRI ¹	29	K						7500	99	7425		37.5	45.45	121.21
CALGENE, INC.	PUB	165	B	0.05	20	33	6.60	10	10	99	1980	16.7	40.0	66.67	166.67
ADVANCED MAGNETICS, INC.	PUB	30	K	12	5	90	4.50	10	2000	99	4950	25.0	185.2	76.92	41.54
INGENE, INC.	PUB	65	P	20	2.7	72	1.94	28	5000	99	1980	14.5	100.0	40.82	40.82
T-CELL SCIENCES	PUB	49	P	13.8	2	65	1.30	35	2000	99	1980			28.33	
IGENE BIOTECHNOLOGY INC.	PUB	30	M						850		198	2.2	4.0	2.00	50.00
UNIVERSITY GENETICS CO.	PUB	100	A	9	5	96	4.80	4	200	99	4455	12.9	75.0	53.57	71.43
SYNTRO CORP.	PUB	84	A	34.75	6	85	5.10	15	4500	99	540	15.0	30.0	28.57	95.24
EPITOPE, INC.	PUB	21	G	4	2	55	1.10	5	600	90	2	20.0	20.0	80.00	880.00
INFERGE COMPANY	PUB	25	S	10	22	2	0.44	1	2000	2	40	23.5	100.0	44.94	44.94
SYNBIOTICS CORP.	PUB	89	K	17	4	80	3.20	5	4000	70	2800	6.7	13.3	11.43	85.71
BIOTECHNOLOGY DEVELOPMENT C	PUB	35	F	6	3				1700	99	1683	10.0	89.5	48.57	54.29
RIBI IMMUNOCHEM RESEARCH, INC	PUB	35	P	17	1.9	60	1.14	40	3000	80	2400	20.0	60.0	54.55	90.91
CAMBRIDGE BIOSCIENCE CORP.	PUB	55	K	20	5	99	4.95	8	4000	99	3960	20.0	80.0	72.73	90.91
IMMUNOMEDICS, INC.	PUB	70	A	5	3	99	2.97	0	800	99	792	16.0	26.7	11.43	42.86
DIAGNOM CORP.	SUB	30	K	17	3.5	99	3.47	0	3500	99	3465	20.6	100.0	116.67	116.67
MOLECULAR DIAGNOSTICS, INC.	SUB	160	S						20000	10	2000		20.0	20.00	100.00
RICERCA, INC	SUB	1000	K		100	15	5.55	0	2500	99	2475	6.8	475.0	13.51	200.00
SYVA CO	SUB	185	M		37	2	1.98	0	9500	99	9405	13.0	100.00	38.62	8.13
COORS BIOTECH PRODUCTS CO.	SUB	246	W		100	3	2.97	0	13000	35	4550	44.9	1033.3	221.43	769.23
MELOY LABORATORIES, INC.	SUB	130	B	69	35	99	14.85	10	5000	85	26350	14.3	33.3	15.38	46.15
ZOECON CORP./SANDOZ CROP PRO	SUB	140	P	35	15	99	3.80	5	4900	35	1715	23.3	14.6	25.52	175.00
TRITON BIOSCIENCES, INC.	PRI-	325	P	21	33.6	40	9.60	0	5450	75	4087.5	82.6	57.4	30.28	52.78
QUIDEL	PRI-	192	B	6.6	9.5	99	9.60	0	287	99	284.13	5.7	3.0	2.68	90.65
UNITED AGRISEEDS INC	PRI-	180	K	5					7000	99	6930	17.2	38.9	19.44	50.00
MUREX CORP.	PRI-	107	H	40.8	18	99	17.82	25	12	99	11.88	6.7	15.0	0.08	1.16
HYCLONE LABORATORIES	PRI-	330	K	96.7	0.18	64	0.12	36	5400	99	5346	38.6	111.1	20.00	133.33
KALLESTAD LABORATORIES	PUB	360	P	14	36	98	35.28	2	20000	99	19800	42.6	20.0	8.00	90.00
BIOPEN	PUB	155	P	47	18	90	16.20	10	5000	75	3960	8.9	66.7	27.59	41.38
CALIFORNIA BIOTECHNOLOGY INC	PUB	270	G		25	15	5.94	0	4000	99					
DIAGNOSTIC PRODUCTS, CORP.	PUB	200	P		6	99									
INTEGRATED GENETICS, INC.	PUB	625	B												
NPI	PUB	145	B												
BIOTECHNICA INTERNATIONAL	PUB	145	B												

Company Name	fin. empl.	class	size	finan. (MM)	exp.revs. (\$MM)	%BT	REVS FROM BT	%int R&Dbud. \$M	%BT	BUDGET --BT(\$M)	BUDGET/ TOT FIN%	R&DBUD/ EX.REVS.%	RD BUD/ EMPL(\$M)	EX REV/ EMPL(\$M)
CENTOCOR	PUB 246	P	L		38	71	26.98	14	18000	99	17820	47.4	73.17	154.47
AMGEN	PUB 215	P	L		30.5	85	25.93	15	29500	99	29205	96.7	137.21	141.86
COLLAGEN CORPORATION	PUB 225	S	L	105	20	25	24.75	0	6800	99	6732	27.2	30.22	111.11
ENDOTRONICS, INC.	PUB 155	F	L						4100				26.45	
GENZYME CORP.	PUB 185	P	L	3.6	16	50	8.00	6	4000	99	3960	111.1	25.0	86.49
BIOSPHERICS	PUB 250	S	L	3	10	10	1.00	1	4000	99	3960	133.3	40.0	40.00
IMMUNEX CORP.	PUB 153	P	L	81.4	14	65	9.10	35	9500	99	9405	11.7	67.9	91.50
CETUS CORPORATION	PUB 675	P	L	320	50	80	40.00	20	45000	99	44550	14.1	90.0	74.07
BIOHERAPEUTICS, INC.	PUB 120	P	L	40	5	90	4.50	10	5000	80	4000	12.5	100.0	41.67
MONOCLONAL ANTIBODIES, INC.	PUB 136	K	L	29.8	9	92	8.28	8	2000	99	1980	6.7	22.2	66.18
ENZO BIOCHEM, INC.	PUB 110	K	L	55	13	46	5.98	23	2500	95	2375	4.5	19.2	118.18
ELECTRO-NUCLEONICS, INC.	PUB 720	K	L	49	123	25	30.75			70				170.83
MOLECULAR GENETICS, INC.	PUB 125	A	L	36	9.5	75	7.13	25	5000	99	4950	13.9	52.6	76.00
CHIRON CORPORATION	PUB 220	P	L	75	11.2	99	11.09	0	13000	99	12870	17.3	116.1	50.91

Company Name	fin.	empl.	class	size	finan.	exp.revs.	%BT	REVS	%Int	R&Dbud.	%BT	BUDGET	BUDGET/	R&DBUD/	RD BUD/	EX REV/
					(MM)	(\$MM)		FROM BT	BT	\$M		--BT(\$M)	TOT FIN%	EX REVS.	% EMPL.	EMPL.(\$M)
DIAGNOS CORP.	PUB	70	A	M	5	3	99	2.97	0	800	99	792	16.0	26.7	11.43	42.86
EMBRX, INC.	PRI	17	A	S	3.5					1200	15	180	34.3		70.59	
IMMUCELL CORPORATION	PRI	17	A	S	21	2.5	99	2.48	1	800	70	560	3.8	32.0	47.06	147.06
MOLECULAR GENETICS, INC	PUB	125	A	L	36	9.5	75	7.13	25	5000	99	4950	13.9	52.6	40.00	76.00
SYNTRON CORP.	PUB	84	A	M	34.75	6	85	5.10	15	4500	99	4455	12.9	75.0	53.57	71.43
UNIVERSITY GENETICS CO.	PUB	100	A	M	9	5	96	4.80	4	200	99	198	2.7	4.0	2.00	50.00
AGDIA, INC.	PRI	8	B	S							90					
AGRACETUS	PRI	65	B	MJV	18.2	0.4			99	7000	99	6930	38.5	1750.0	107.69	6.15
BENTECH LABORATORIES	PRI	7	B	S	0.8	0.75	95	0.71	5	40	99	39.6	5.0	5.3	5.71	107.14
BIOTECHNICA INTERNATIONAL	PUB	145	B	L	45	6	99	5.94	0	4000	99	3960	8.9	66.7	27.59	41.38
CALGENE, INC.	PUB	165	B	M	0.05	20	33	6.60	10	7500	99	7425		37.5	45.45	121.21
CROP GENETICS INTERNATIONAL	PRI	49	B	M		2.5	99	2.77	0	2800	99	2772	17.5	100.0	56.00	51.02
INTERN'L PLANT RESEARCH INST.	PRI	50	B	M	16	2.8	15	3.75	5	5000	75	3750		20.0	8.00	40.00
NPI	PUB	625	B	L	5	0.5	99	0.50	0	800	99	792	16.0	160.0	40.00	25.00
PHYTOGEN	PRI	20	B	S		6.05	25	1.51	2	2100	75	1575		34.7	33.33	96.03
PLANT GENETICS, INC.	PRI	63	B	M	15	2.5			5	4000	75	3000	26.7	160.0	100.00	62.50
SEPRACOR, INC.	PRI	40	B	M	21	33.6			0	4900	35	1715	23.3	14.6	25.52	175.00
UNITED AGRISSEDS INC	PRI	192	B	L		100			0	13000	35	4550		13.0	100.00	769.23
ZOECON CORP.(SANDOZ CROP PRO SUB	PRI	130	B	LU	3.2		99				99					
BIOCHEM TECHNOLOGY INC	PRI	10	D	S	1.3	0.524	74	0.39	0	400	90	360	30.8	76.3	26.67	34.93
BIOMATERIALS INTERNATIONAL	PRI	15	D	S		0.2				500	40	200		250.0	62.50	25.00
INTEGRATED CHEMICAL SENSORS	PRI	8	D	S		0.25	40	0.26	2	200	50	100	80	30.8	25.00	81.25
A/G TECHNOLOGY CORP.	PRI	8	E	S	0.25	0.65				295	99	292.05	16.4	21.1	19.67	93.33
BIOPROBE INTERNATIONAL, INC.	PRI	15	E	S	1.8	1.4	91	1.27	9							
APPLIED PROTEIN TECHNOLOG. INC	PRI	5	F	S	1		99	1.49	3	1500	99	1485	100.0	100.0	60.00	60.00
BIO-TECHNICAL RESOURCES, INC.	PRI	25	F	M	1.5	1.5			10	400			6.7	13.3	11.43	85.71
BIOTECHNOLOGY DEVELOPMENT C	PUB	35	F	M	6	3				4100	99				26.45	
ENDOTRONICS, INC.	PUB	155	F	L												
HP GENENCHEM	PRI		F	MJ			99									
MULTIPLE PEPTIDE SYSTEMS INC	PRI	2	F	S		0.12	99	0.12								60.00
NYGENE CORP.	PRI	18	F	S		0.375	99	0.37								20.83
QUEUE SYSTEMS INC	PRI	85	F	M	12	8	99	7.92	0	500	99	495	4.2	6.3	5.88	94.12
ADVANCED BIOTECHNOLOGIES	PRI	17	G	S			99	2.97	0							176.47
CHEMICON INTERNATIONAL, INC	PRI	8	G	S		1.5	90	1.35	0	250	99	247.5		16.7	31.25	187.50
DIAGNOSTIC PRODUCTS, CORP.	PUB	270	G	L	14	36	98	35.28	2	5400	99	5346	38.6	15.0	20.00	133.33
EPITOPE, INC.	PUB	21	G	M	4	2	55	1.10	5	600	90	540	15.0	30.0	28.57	95.24
JACKSON IMMUNORESEARCH LAI	PRI	16	G	S	1	1.5	99	1.49	2	50	99	49.5	5.0	3.3	3.13	93.75
MOLECULAR GENETIC RESOURCES	PRI	5	G	S		0.3	99	0.30								60.00
MONOCLONAL GENETIC SYSTEMS	PRI	5	G	S		0.4	99	0.40	0	500	99	495		125.0	100.00	80.00
STRATAGENE CLONING SYSTEMS	PRI	40	G	M		4	90	3.60	10	1000	99	990		25.0	25.00	100.00
ZYMED LABORATORIES, INC.	PRI	20	G	S												

Company Name	fin.	empl.	class	size	finan.	exp.revs.	%BT	REVS	%Int	R&Dbud.	%BT	BUDGET	BUDGET/	R&DBUD/	RD BUD/	EX REV/
					(MM)	(\$MM)		FROM BT	\$M			-\$T(\$M)	TOT FIN%	EX.REVS.%	EMPL(\$M)	EMPL(\$M)
BIONIQUE LABS INC.	PRI:	9	H	S	0.3	0.6	90	0.54	1	200	99	198	66.7	33.3	22.22	66.67
HYCLONE LABORATORIES	PRI:	107	H	L	5	9.7	99	9.60	0	287	99	284.13	5.7	3.0	2.68	90.65
MYCOSEARCH, INC.	PRI:	4	H	S	0.01	0.25	99	0.25	0	150	99	148.5	1500.0	60.0	37.50	62.50
AMERICAN BIOGENETICS CORP	PRI:	10	I	S	1.2	0.485	95	0.46	5	480	99	475.2	40.0	99.0	48.00	48.50
BIOMEDICAL TECHNOLOGIES	PRI:	7	J	S			5		8		99					75.00
BIOGENE MANAGEMENT INC.	PRI:	8	J	S		0.6	99	0.59			99					200.00
CALZYME LABORATORIES, INC.	PRI:	10	J	S		2	99	1.98			99					100.00
GENENCOR, INC.	PRI:	100	J	MJV	40	10	99	9.90	5	10000	99	9900	25.0	100.0	100.00	
MICROBIO RESOURCES	PRI:	39	J	M	8					500	60	300	6.3		12.82	
WESTRIDGE RESEARCH GROUP	PRI:	15	J	S	9	1.4	99	1.39	0	250	99	247.5	2.8	17.9	16.67	93.33
ADVANCED MAGNETICS, INC.	PUB	30	K	M	12	5	90	4.50	10	2000	99	1980	16.7	40.0	66.67	166.67
AGRI-DIAGNOSTICS ASSOCIATES	PRI:	22	K	SJ							99					142.86
AGRITHE SYSTEMS, INC	PRI:	70	K	M	12	10	99	9.90	0	2500	99	2475	20.8	25.0	35.71	222.22
AMERICAN DIAGNOSTICA, INC.	PRI:	9	K	S		2	99	1.98		300	99	297	15.5	15.0	33.33	80.00
ANGENICS	PRI:	50	K	M	11	4	99	3.96	0	1700	25	425	62.5	42.5	34.00	
ANTIVIRALS, INC	PRI:	6	K	S	0.4		99			250	99	148.5	33.3	10.0	41.67	125.00
BINAX, INC	PRI:	12	K	S	0.45	1.5	99	1.49		150	99					86.67
BIOGENEX LABORATORIES	PRI:	30	K	M			95		5		99					23.53
BIOSTAR MEDICAL PRODUCTS, INC.	PRI:	30	K	M	6.5	2.6	80	2.08	3	1000	99	990	100.0	250.0	58.82	90.91
CALIFORNIA INTEGRATED DIAGNOS	SUB	17	K	SU	1	0.4	99	0.40		3000	80	2400		60.0	54.55	
CAMBRIDGE BIOSCIENCE CORP.	PUB	55	K	M		5	80	4.00	20		99					63.33
COVALENT TECHNOLOGY CORP.	SUB	16	K	S	1.4	1.9	99	1.88	0	350	99	346.5	23.3	18.4	11.67	170.83
DIAMEDIX, INC.	PRI	720	K	L	1.5	123	25	30.75		2500	70	2375	4.5	19.2	22.73	118.18
ELECTRO-NUCLEONICS, INC.	PUB	110	K	L	55	13	46	5.98	23		95					
ENZO BIOCHEM, INC.	PRI:	113	K	M	16.95		95		5	1500	99	600				58.82
GEN-PROBE, INC.	PRI:	29	K	M			1	0.99	0		40					86.67
GENESIS LABS, INC.	PUB	17	K	S		1.3	99	1.29		120	99	118.8	14.3	9.2	8.00	
GENETIC DIAGNOSTICS CORP.	PRI:	15	K	S	0.84											
IMMUNOTECH CORP.	PRI:	330	K	L		1.5	90	1.35	0	1500	99	1485		100.0	28.30	28.30
KALLESTAD LABORATORIES	PRI:	53	K	M	9.2	6	33	1.98	5	4000	25	1000	43.5	66.7	57.14	85.71
LIFECODES CORP.	PRI:	70	K	M	17	3.5	99	3.47	0	3500	99	3465	20.6	100.0	116.67	116.67
MICROGENICS	SUB	30	K	M	29.8	9	92	8.28	8	2000	99	1980	6.7	22.2	14.71	66.18
MOLECULAR DIAGNOSTICS, INC.	PUB	136	K	L	6.6	9.5	40	3.80	5	5450	75	4087.5	82.6	57.4	30.28	52.78
MONOCLONAL ANTIBODIES, INC.	PRI:	180	K	L	1.2	0.2	99	0.20	1	200	99	198	16.7	100.0	16.67	16.67
MUREX CORP.	PRI:	12	K	S	17	4	80	3.20	5	4000	70	2800	23.5	100.0	44.94	44.94
RECOMITEX CORP.	PUB	89	K	M		100				20000	10	2000		20.0	20.00	200.00
SYNBIOTICS CORP.	SUB	1000	K	LU		37	15	5.55	0	2500	99	2475	8.1	6.8	13.51	86.96
SYVA CO	SUB	185	M	LU		2	99	1.98	17	440	99	435.6		22.0	19.13	
COORS BIOTECH PRODUCTS CO.	PRI:	23	M	M	5.4					850					28.33	
CYANOTECH CORPORATION	PUB	30	M	M												
IGENE BIOTECHNOLOGY INC.	PUB	30	M	M												

FIN/REV/BUD DATA: SORT BY COMPANY PRIMARY INTEREST

Company Name	fin.	empl.	class	size	finan.	exp.revs.	%BT	REVS	%Int	R&Dbud.	%BT	BUDGET	BUDGET/	R&DBUD/	RD BUD/	EX REV/
					(MM)	(\$MM)		FROM BT	BT	\$M		--BT(\$M)	TOT FIN%	EX.REVS.%	EMPL.(\$M)	EMPL.(\$M)
BALL BIOTECH COMPANY	PRI	25	O	M	2.5	0.3	99	0.30	0	0	250	99	247.5	10.0	83.3	10.00
ENZYME TECHNOLOGY CORP.	SUB	26	O	MU	10	3	99	1.39	0	0	3000	99	2970	30.0	100.0	37.50
VERAX CORP.	PRI	80	O	M	10	3	99	1.39	0	0	3000	99	2970	30.0	100.0	37.50
ALPHA I BIOMEDICALS	PUB	9	P	S	6	1.4	99	1.39	0	0	700	99	693	11.7	50.0	77.78
AMERICAN BIOTECHNOLOGY CO	PRI	5	P	S	0.1	0.1	99	1.39	0	0	163	99	161.37	163.0		32.60
AMERICAN LABORATORIES, INC	PRI	26	P	M	105	30.5	85	25.93	15	29500	99	29205	28.1	96.7	137.21	141.86
AMGEN	PUB	215	P	L	105	30.5	85	25.93	15	29500	99	29205	28.1	96.7	137.21	141.86
AUTOMEDIX SCIENCES, INC	PRI	6	P	S	0.75	0.75	50	17.82	25	7000	50	175	46.7	58.33	19.44	50.00
BIODEN	PUB	360	P	L	40.8	18	99	17.82	25	7000	99	6930	17.2	38.9	19.44	50.00
BIOHERAPEUTICS, INC.	PUB	120	P	L	40	5	90	4.50	10	5000	80	4030	12.5	100.0	41.67	41.67
CALIFORNIA BIOTECHNOLOGY INC	PUB	155	P	L	96.7	0.18	64	0.12	36	12	99	11.88	6.7	0.08	1.16	1.16
CENTOCOR	PUB	246	P	L	38	38	71	26.98	14	18000	99	17820	14.1	47.4	73.17	154.47
CETUS CORPORATION	PUB	675	P	L	320	50	80	40.00	20	45000	99	44550	17.3	90.0	66.67	74.07
CHIRON CORPORATION	PUB	220	P	L	75	11.2	99	11.09	0	13000	99	12870	17.3	116.1	59.09	50.91
DNAX	PUB	81	P	MU	14	14	99	11.09	0	14000	99	13860	100.0	172.84	172.84	172.84
EXOVIR, INC.	PUB	5	P	S	5	5	511	8.00	6	4000	40	204.4	10.2	25.0	21.62	86.49
GENZYME CORP.	PUB	185	P	L	3.6	16	50	8.00	6	4000	99	3960	111.1	25.0	21.62	86.49
IMMUNEX CORP.	PUB	153	P	L	81.4	14	65	9.10	35	9500	99	9405	11.7	67.9	62.09	91.50
IMMUNO MODULATORS LABS. INC	PRI	25	P	M	7.2	2.8	99	2.77	700	700	99	693	9.7	25.0	28.00	112.00
IMMUNOMEDICS, INC.	PUB	55	P	M	20	5	99	4.95	8	4000	99	3960	20.0	80.0	72.73	90.91
INCENE, INC.	PUB	65	P	M	20	2.7	72	1.94	28	5000	99	4950	25.0	185.2	76.92	41.54
INTEGRATED GENETICS, INC.	PUB	200	P	L	47	18	90	16.20	10	20000	99	19800	42.6	111.1	100.00	90.00
INTERFERON SCIENCES, INC.	PRI	70	P	M	26	0.9	99	0.89	0	5000	99	4950	19.2	166.7	375.00	225.00
LUCKY BIOTECH CORP.	SUB	4	P	SU	18	6	95	5.70	5	6000	99	5940	33.3	100.0	60.00	60.00
NEORX CORP.	PRI	100	P	M	0.05	0.05	50	5.70	5	6000	99	49.5	100.0	25.00	25.00	25.00
NORTH COAST BIOTECHNOLOGY INC	PRI	2	P	S	4.5	2	95	1.90	5	1500	99	1485	33.3	75.0	60.00	80.00
PHARMATEC, INC	PRI	25	P	M	35	15	99	14.85	10	5000	99	4950	14.3	33.3	15.38	46.15
QUIDEL	PRI	325	P	L	17	1.9	60	1.14	40	1700	99	1683	10.0	89.5	48.57	54.29
RIBI IMMUNOCHEM RESEARCH, INC	PUB	35	P	M	13.8	2	65	1.30	35	2000	99	1980	14.5	100.0	40.82	40.82
T-CELL SCIENCES	PUB	49	P	M	69	3	99	2.97	0	31000	85	26350	44.9	1033.3	221.43	21.43
TRITON BIOSCIENCES, INC.	SUB	140	P	LU	4	3	95	2.85	5	2500	99	2475	62.5	83.3	83.33	100.00
UNIGENE LABORATORIES, INC.	PRI	30	P	M	7.5	6	95	5.70	5	2000	99	1980	26.7	33.3	21.05	63.16
ZYMOGENETICS, INC.	PRI	95	P	M	14	14	95	5.70	5	2000	99	1980	26.7	33.3	21.05	63.16
IMMUNOMED	PRI	17	Q	S	14	14	95	5.70	5	2000	99	1980	26.7	33.3	21.05	63.16
ADVANCED MINERAL TECHNOLOG	PRI	14	R	S	14	14	95	5.70	5	2000	99	1980	26.7	33.3	21.05	63.16
BERKELEY ANTIBODY	PRI	20	S	S	14	14	95	5.70	5	2000	99	1980	26.7	33.3	21.05	63.16
BETHYL LABS INC.	PRI	8	S	S	14	14	95	5.70	5	2000	99	1980	26.7	33.3	21.05	63.16
BIOPOLYMERS, INC.	PRI	15	S	S	14	14	95	5.70	5	2000	99	1980	26.7	33.3	21.05	63.16
BIOSPHERICS	PUB	250	S	L	3	3	10	1.00	1	4000	99	3960	133.3	40.0	16.00	40.00
COLLAGEN CORPORATION	PUB	225	S	L	20	25	99	24.75	0	6800	99	6732	34.0	27.2	30.22	111.11
CYGNUS RESEARCH CORP.	PRI	15	S	S	1	1	700	24.75	0	700	700	6732	70.0	27.2	30.22	111.11

NCBC BUSINESS STUDIES PROGRAM--COMPANIES DATABASE DATE-APR 30 87 PAGE-1
BIOTECHNOLOGY COMPANIES IN DATABASE
FINANCING SOURCES

CODE	COMPANY NAME	VC %	PI %	EUS %	EFOR %	PUB %	RDLP %	TOTAL \$MM
A	DIAGNON CORP.					99		5.00
A	EMBEX, INC.	99						3.50
A	IMMUCELL CORPORATION		99					21.00
A	MOLECULAR GENETICS, INC					90		36.00
A	SYNTRO CORP.	13	1	20	11	26	29	34.75
A	UNIVERSITY GENETICS CO.	0	0	99		99	0	9.00
B	AGDIA, INC.	0	99					
B	AGRACETUS	0	99					18.20
B	BENTECH LABORATORIES		99					0.80
B	BIOTECHNICA INTERNATIONAL							45.00
B	CALGENE, INC.	20	5	90	10	65	0	0.05
B	CROP GENETICS INTERNATIONAL	99						
B	INTERN'TL PLANT RESEARCH IN		92	8				16.00
B	NPI							
B	PHYTOGEN		99					5.00
B	PLANT GENETICS, INC.							
B	SEPRACOR, INC.	70		30				15.00
B	UNITED AGRISEEDS INC	61	39					21.00
B	ZOECON CORP. (SANDOZ CROP PR							
D	BIOCHEM TECHNOLOGY INC		99					3.20
D	BIOMATERIALS INTERNATIONAL,	90	0	10	0	0		1.30
D	INTEGRATED CHEMICAL SENSORS	4	52					
E	A/G TECHNOLOGY CORP.	95	5	0	0	0	0	0.25
E	BIOPROBE INTERNATIONAL, INC	30	30		40			1.80
F	APPLIED PROTEIN TECHNOL. IN		30	70				1.00
F	BIO-TECHNICAL RESOURCES, IN		99					1.50
F	BIOTECHNOLOGY DEVELOPMENT C	12				88		6.00
F	ENDOTRONICS, INC.							
F	HP GENENCHEM		99					
F	MULTIPLE PEPTIDE SYSTEMS IN	0	99					
F	NYGENE CORP.	99						
F	QUEUE SYSTEMS INC	80	20					12.00
G	ADVANCED BIOTECHNOLOGIES		99					
G	CHEMICON INTERNATIONAL, INC		99					
G	DIAGNOSTIC PRODUCTS, CORP.					99		14.00
G	EPITOPE, INC.			20		43		4.00
G	JACKSON IMMUNORESEARCH LAB	0	99	0	0	0	0	1.00
G	MOLECULAR GENETIC RESOURCES		99					
G	MONOCLONETICS INTERNAT'L, I		99					
G	STRATAGENE CLONING SYSTEMS	18	82					
G	ZYMED LABORATORIES, INC.		99					
H	BIONIQUE LABS INC.		50					0.30
H	HYCLONE LABORATORIES		99					5.00

NCBC BUSINESS STUDIES PROGRAM--COMPANIES DATABASE DATE-APR 30 87 PAGE-2
 BIOTECHNOLOGY COMPANIES IN DATABASE
 FINANCING SOURCES

CODE	COMPANY NAME	VC %	PI %	EUS %	EFOR %	PUB %	RDLP %	TOTAL \$MM
H	MYCOSEARCH, INC.	0	99	0	0	0	0	0.01
I	AMERICAN BIOGENETICS CORP		99					1.20
J	BIOMEDICAL TECHNOLOGIES	0	99					
J	BIOSCIENCE MANAGEMENT INC.		99					
J	CALZYME LABORATORIES, INC.							
J	GENENCOR, INC.		99					40.00
J	MICROBIO RESOURCES		99					8.00
J	WESTBRIDGE RESEARCH GROUP		5	40			55	9.00
K	ADVANCED MAGNETICS, INC.	0	15	0	0	85		12.00
K	AGRI-DIAGNOSTICS ASSOCIATES			99				
K	AGRITECH SYSTEMS, INC	70					30	12.00
K	AMERICAN DIAGNOSTICA, INC.		99					
K	ANGENICS	99						11.00
K	ANTIVIRALS, INC						99	0.40
K	BINAX, INC							0.45
K	BIOGENEX LABORATORIES		99					
K	BIOSTAR MEDICAL PRODUCTS, I	25	75			0	0	6.50
K	CALIFORNIA INTEGRATED DIAGN		99					1.00
K	CAMBRIDGE BIOSCIENCE CORP.							
K	COVALENT TECHNOLOGY CORP.		20				80	1.40
K	DIAMEDIX, INC.		99	99				1.50
K	ELECTRO-NUCLEONICS, INC.							49.00
K	ENZO BIOCHEM, INC.		65	25		10		55.00
K	GEN-PROBE, INC.	45		22			33	16.95
K	GENESIS LABS, INC.	99						
K	GENETIC DIAGNOSTICS CORP.					99		
K	IMMUNOTECH CORP.	9	91	99				0.84
K	KALLESTAD LABORATORIES							
K	LIFECODES CORP.		99					
K	MICROGENICS	97	3					9.20
K	MOLECULAR DIAGNOSTICS, INC.				99			17.00
K	MONOCLONAL ANTIBODIES, INC.	3				90	7	29.80
K	MUREX CORP.	0	95	0	0	0	0	6.60
K	RECOMTEX CORP.		99					1.20
K	SYNBIOTICS CORP.	0	0	0	0	80	20	17.00
K	SYVA CO							
M	COORS BIOTECH PRODUCTS CO.							
M	CYANOTECH CORPORATION		50	16	19		12	5.40
M	IGENE BIOTECHNOLOGY INC.							
O	BALL BIOTECH COMPANY		99					2.50
O	ENZYME TECHNOLOGY CORP.		0	99				
O	VERAX CORP.	50	50					10.00
P	ALPHA I BIOMEDICALS		33			66		6.00

BIOTECHNOLOGY COMPANIES IN DATABASE
FINANCING SOURCES

CODE	COMPANY NAME	VC %	PI %	EUS %	EFOR %	PUB %	RDLP %	TOTAL \$MM
P	AMERICAN BIOTECHNOLOGY CO							0.10
P	AMERICAN LABORATORIES, INC		99					
P	AMGEN	17	3	0	0	80	0	105.00
P	AUTOMEDIX SCIENCES, INC	0	99					0.75
P	BIOGEN					99		40.80
P	BIO THERAPEUTICS, INC.		2	8		90		40.00
P	CALIFORNIA BIOTECHNOLOGY IN			99			1	96.70
P	CENTOCOR							
P	CETUS CORPORATION		10			50	40	320.00
P	CHIRON CORPORATION		09			84	7	75.00
P	DNAX			99				14.00
P	EXO VIR, INC.		60			40		5.00
P	GENZYME CORP.					99		3.60
P	IMMUNEX CORP.	1				44		81.40
P	IMMUNO MODULATORS LABS. INC			99				7.20
P	IMMUNOMEDICS, INC.		10			18		20.00
P	INGENE, INC.	10	40			50		20.00
P	INTEGRATED GENETICS, INC.	20	6	6		80	0	47.00
P	INTERFERON SCIENCES, INC.		46			35	19	26.00
P	LUCKY BIOTECH CORP.				99			2.00
P	NEORX CORP.	28		67				18.00
P	NORTH COAST BIOTECHNOLOGY I		99					0.05
P	PHARMATEC, INC	0	33	67	0	0	0	4.50
P	QUIDEL	85		10	5			35.00
P	RIBI IMMUNOCHEM RESEARCH, I	1	2			97		17.00
P	T-CELL SCIENCES							13.80
P	TRITON BIOSCIENCES, INC.		99					69.00
P	UNIGENE LABORATORIES, INC.	8	92	0	0	0	0	4.00
P	ZYMOGENETICS, INC.	15	85		70			7.50
Q	IMMUNOMED	90	10	85	15			14.00
R	ADVANCED MINERAL TECHNOLOGI	90	0	10	0	0	0	
S	BERKELEY ANTIBODY	0	25					
S	BETHYL LABS INC.		99					
S	BIOPOLYMERS, INC.		99					3.10
S	BIOSPHERICS	0	1	45	24	20		3.00
S	COLLAGEN CORPORATION	10		90				20.00
S	CYGNUS RESEARCH CORP.	15	0	0	0	0	0	1.00
S	E-Y LABORATORIES, INC		8					
S	GLEN MILLS, INC.		99					
S	INFERGENE COMPANY		20		20	60		10.00
S	INTELLI-GENETICS	0	99					3.80
S	INTER-CELL TECHNOLOGIES, IN							
S	RICERCA, INC							

NCBC BUSINESS STUDIES PROGRAM--COMPANIES DATABASE DATE-APR 30 87 PAGE-4
 BIOTECHNOLOGY COMPANIES IN DATABASE
 FINANCING SOURCES

CODE	COMPANY NAME	VC %	PI %	EUS %	EFOR %	PUB %	RDLP %	TOTAL \$MM
T	MARICULTURA, INC.							
T	NEUSHUL MARICULTURE	99	0	0	0	0	0	0.15
T	R & A PLANT/SOIL INC.	0	5	0	0	0	0	
V	AMTRON	0	99					2.00
V	BIOLOGICS CORP	0	0	0	0	0		
W	BIOMATRIX, INC.	15			5			3.00
W	MELOY LABORATORIES, INC.	0	0	0	0	0	0	
X	TRANSFORMATION RESEARCH INC		99					

	n	min.	max.	total empl.	%sci	%tot	PhD %tot	%sci tot	%sci sci.	mgt	%tot	adv. deg.	%mgt sales	%tot prdn	%tot revs.	exp rev/empl. thous.\$								
T-CELL SCIENCES	1983	PUB--M	49	38	77.6	10	20.41	26.3	38	100	6	12.2	6	100	3	6.12	2	4.08	2	40.816	0.3	62.500		
TRANSFORMATION RESEARCH INC.	1981	PRIVA S	X	4		3	75.00						1							3	21.429	0	100.000	
TRITON BIOSCIENCES, INC.	1983	SUBSILU	P	140	80	57.1	20	14.29	25	10	12.5	12	8.57	12	100	6	4.29	10	7.14	3	62.500	0	100.000	
UNIGENE LABORATORIES, INC.	1980	PRI-9M	P	30	22	73.3	11	36.67	50	22	100	2	6.67	2	100	1	3.33	0	0	3	100.000	0	100.000	
UNITED AGRISEEDS INC	1981	PRI-3L	B	192	20	10.4	6	3.13	30	14	70	5	2.6	2	40	1	0.52	0	0	34	175.000	5	50.000	
UNIVERSITY GENETICS CO.	1981	PUB= M	A	100																3	37.500	3	37.500	
VERAX CORP.	1979	PRI-5M	O	80	40	50	8	10.00	20	20	50								1	6.67	1.4	93.333		
WESTBRIDGE RESEARCH GROUP	1982	PRIVA S	J	15	4	26.7	4	26.67	100	3	75	4	26.7	2	50	1		1	6.67	1.4	93.333	100	769.231	
ZEECON CORP.(SANDOZ CROP PRO)	1988	SUBSILU	B	130	100	76.9	25	19.23	25	70	70	10	7.69	10	100									
ZYMED LABORATORIES, INC.	1980	PRI-S	G	20	12	60	3	15.00	25	3	25													
ZYMOGENETICS, INC.	1981	PRIVA M	P	95	69	72.6	23	24.21	33.3	70	101.4	10	10.5	5	50	2	2.11	0	0					
Employee Data																								
average	85.9	42	54.3	12	20.8	37	19	46.24	24	26.1	4.6	52.1	6.52	9.03	18	16.7								
minimum	2	1	6	0	0	0	0	0	1	2.6	0	0	0	0	0	0								
maximum	1000	370	100	110	75	100	175	101.4	500	82.4	30	100	99	50	450	75.7	123							
count	135	100	99	125	124	94	115	86	92	92	112	83	114	113	103	105								
Median Employee/Co.=30																								
Revenue Data																								
exp rev/empl. \$thous	exp	rev/empl	exp	rev/empl	exp	rev/empl	exp	rev/empl	exp	rev/empl	exp	rev/empl	exp	rev/empl	exp	rev/empl	exp	rev/empl	exp	rev/empl	exp	rev/empl	exp	rev/empl
6	63.158	9.6	97.93	1.1613	880	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	
ANIMAL AGRICULTURE-A																								
PLANT AGRICULTURE-B	13	7	625	51	57.3	17	23.2	31.9	17	38.02	62	25.5	5.1	47.9	9.18	8.16	75	22.9	17	129.22	17	129.22	17	129.22
REAGENTS-G	9	5	270	44.7	8.8	51.9	4.1	20.6	44.6	5.8	43.75	3.5	23.7	1.6	51.7	7.13	14.1	16	26.9	6.1	115.79	6.1	115.79	
SPECIALTY CHEMICALS-J	29.8	17	44.3	9	18.2	54.2	10	52.78	8	26	4.8	62.5	2	15	4.3	23.9	3.5	117.08	3.5	117.08	3.5	117.08	3.5	117.08
DIAGNOSTICS, CLINICAL HUMAN-K	28	6	1000	117	40	50.2	9.4	18.2	33.1	16	37.38	31	30.8	4.7	38.5	10.7	9.94	16	18.1	14	92.711	14	92.711	
THERAPEUTICS-P	30	2	675	123	72	60.2	26	27.3	46.4	45	64.42	26	21	7	58.4	6.26	5.73	19	12.2	11	81.434	11	81.434	
MEDIUM COMPANIES (n=51)																								
SMALL COMPANIES (n=55)	min.	max.	2	20	average	11.1	6.5	54.7	2.6	26.3	47.5	3.7	45.88	3.6	32.3	1.4	1.09	12	2	16	0.9	88.342	0.9	88.342
LARGE COMPANIES (n=31)	min.	max.	21	100	average	55.3	35	59.4	10	19.5	31.9	15	50.68	14	22.3	4.6	53.2	6.9	9.2	16.2	5	99.048	5	99.048
	min.	max.	101	1000	average	267	106	46.4	30	13.7	29.3	47	41.37	68	21.6	11	47	20	7.47	58	18.8	27	108.66	
	min.	max.	101	1000	average	267	106	46.4	30	13.7	29.3	47	41.37	68	21.6	11	47	20	7.47	58	18.8	27	108.66	

PRODUCT AND PATENT DATA--SORTED BY COMPANY

	CLASS NO.	SIZE	FIN.	'81	'82	'83	'84	'85	'86	'87	'88	'81-'88	TOT. PRDS	PATENT	APPS.
	EMPL.			PRODUCTS PER YEAR											
A/G TECHNOLOGY CORP.	E	8	S	PRIV	0	0	0	0	0	0	1	2	3	688	3
ADVANCED BIOTECHNOLOGIES	G	17	S	PRIV											12
ADVANCED MAGNETICS, INC.	K	30	M	PUB											2
ADVANCED MINERAL TECHNOLOGIE	R	14	S	PRIV	0	0	0	0	0	0	1	2	3		2
AGDIA	K	9	S	PRI	0	8	0	0	0	0	0	2	2		20
AGRACETUS	B	65	MJ	PUB	0	0	0	0	0	0	1	1	2		5
AGRI-DIAGNOSTICS ASSOCIATES	K	22	SJ	PRIV										100	3
AGRITech SYSTEMS, INC	K	70	M	PRI				10	20	30	40				2
ALPHA I BIOMEDICALS	P	9	S	PUB											2
AMERICAN BIOGENETICS CORP	I	10	S	PRI											2
AMERICAN BIOTECHNOLOGY CO	P	5	S	PRI											2
AMERICAN DIAGNOSTICA, INC.	K	9	S	PRIV			1	2	3	5	7	18			2
AMERICAN LABORATORIES, INC	P	26	M	PRIV											0
AMGEN	P	215	L	PUB				6	6	2	2	16			300
AMTRON	V	16	S	PRIV											35
ANGENICS	K	50	M	PRIV	0	0	0	1	1	2	2	8			5
ANTIVIRALS, INC	K	6	S	PRI	0	0	0	0	0	5	50	55			6
APPLIED PROTEIN TECHNOL. INC	F	5	S	PRI						1	2	7			2
AUTOMEDIX SCIENCES, INC	P	6	S	PRI	0	0	0	0	0	0	1	1			0
BALL BIOTECH COMPANY	O	25	M	PRIV	0	0	0	0	0	20	40	60			10
BENTECH LABORATORIES	B	7	S	PRI						1	3	5			1
BERKELEY ANTIBODY	S	20	S	PRIV	1			2	1	1					2
BETHYL LABS INC.	S	8	S	PRI	20	20	30	30	100	100	150	200			0
BINAX, INC	K	12	S	PRI						10	5	20			0
BIO-TECHNICAL RESOURCES, INC.	F	25	M	PRI											1
BIOCHEM TECHNOLOGY INC	D	10	S	PRI			2	3	4	6	9	12	36		3
BIOGEN	P	360	L	PUB				1	1	1	1	1	5		530
BIOGENEX LABORATORIES	K	30	M	PRI	2	6	60	60	10				138		0
BIOLOGICS CORP	V	85	MU	SUB						1	1		2		2
BIOMATERIALS INTERNATIONAL, INC	D	15	S	PRIV				1					3		2
BIOMATRIX, INC.	W		M	PRIV											0
BIOMEDICAL TECHNOLOGIES	J	7	S	PRI	12	29	35	45	70	90	105	115	501		0
BIONIQUE LABS INC.	H	9	S	PRI	0	0	1	2	2	2	4	8	19		3
BIOPOLYMERS, INC.	S	15	S	PRI						1		1	2		3

PRODUCT AND PATENT DATA--SORTED BY COMPANY

CLASS NO.	NO.	SIZE	FIN.	PRODUCTS PER YEAR										'81-'88 TOT. PRDS	APPS. PATENT
				'81	'82	'83	'84	'85	'86	'87	'88				
EMPL.															
E	15	S	PRIV					2	8	10	12	32	6		
J	8	S	PRI=	0	0	0	0	5	20	30	30	85	0		
S	250	L	PUB=	3	3	3	3	3	3	2	3	23	5		
K	30	M	PRI		0	0	0	0	2	10	16	28	40		
B	145	L	PUB	0	0	0	0	0	0	2	2	2	0		
F	35	M	PUB=	0	0	0	0	0	0	0	0	0	2		
P	120	L	PUB=	0	0	0	0	0	0	0	0	0	2		
B	165	L	PUB	0	0	0	0	0	0	0	0	0	28		
P	155	L	PUB	0	0	0	0	0	0	0	0	0	100		
K	17	SU	SUB		50	50	50	70	70	70	70	360	1		
J	10	S	PRIV		1	2	3	3	3	3	3	9	5		
K	55	M	PUB		1	1	1	1	1	3	1	8	250		
P	246	L	PUB		10	50	500	500	2K	560	7	450			
P	675	L	PUB=	2	2	3	3	4	4	6	4	24	25		
G	8	S	PRIV		2	3	3	3	3	4	6	16	10		
P	220	L	PUB		0	0	0	1	2	3	4	15	3		
S	225	L	PUB=		0	0	0	0	0	4	5	11	3		
M	185	LU	SUBS	25	40	55	65	85	140	200	230	840	0		
K	16	S	SUBS		0	0	0	0	0	10	10	20	4		
B	49	M	PRIV		0	0	0	0	0	0	0	0	20		
M	23	M	PRI=		0	0	0	0	0	0	0	0	4		
S	15	S	PRI=		0	0	0	0	0	0	0	0	3		
A	70	M	PUB	0	0	0	0	0	4	5	2	11	0		
G	270	L	PUB	25	40	55	65	85	140	200	230	840	2		
K	30	M	PRI	0	0	0	0	0	0	10	10	20	4		
P	81	MU	PUB	0	0	0	0	0	0	0	0	0	20		
S	20	S	PRIV		1	1	1	1	1	1	1	2	4		
K	720	L	PUB	15	25	40	75	92	100	110	120	577	20		
A	17	S	PRI	0	1	2	2	2	2	2	3	9	330		
F	155	L	PUB	0	0	0	0	0	0	0	0	0	0		
K	110	L	PUB	0	0	0	0	0	0	0	0	0	2		
O	26	MU	SUBS	0	0	0	0	0	0	0	0	0	5		
G	21	M	PUB	0	0	0	0	0	0	0	0	0	2		
P	5	S	PUB	0	0	0	0	0	0	0	0	0	5		
BIOPROBE INTERNATIONAL, INC.															
BIOSCIENCE MANAGEMENT INC.															
BIOSPHERICS															
BIOSTAR MEDICAL PRODUCTS, INC.															
BIOTECHNICA INTERNATIONAL															
BIOTECHNOLOGY DEVELOPMENT COI															
BIOTHERAPEUTICS, INC.															
CALGENE															
CALIFORNIA BIOTECHNOLOGY, INC.															
CALIFORNIA INTEGRATED DIAGNOST															
CALZYME LABORATORIES, INC.															
CAMBRIDGE BIOSCIENCE CORP.															
CENTOCOR															
CETUS CORPORATION															
CHEMICON INTERNATIONAL, INC															
CHIRON CORPORATION															
COLLAGEN CORPORATION															
COORS BIOTECH PRODUCTS CO.															
COVALENT TECHNOLOGY CORP.															
CROP GENETICS INTERNATIONAL, NV															
CYANOTECH CORPORATION															
CYGNUS RESEARCH CORP.															
DIAGNOSON CORP.															
DIAGNOSTIC PRODUCTS, CORP.															
DIAMEDIX, INC.															
DNAX															
E-Y LABORATORIES, INC															
ELECTRO-NUCLEONICS, INC.															
EMBEX, INC.															
ENDOTRONICS, INC.															
ENZO BIOCHEM, INC.															
ENZYME TECHNOLOGY CORP.															
EPTOPE, INC.															
EPXOVIR, INC.															

BIOPROBE INTERNATIONAL, INC.
 BIOSCIENCE MANAGEMENT INC.
 BIOSPHERICS
 BIOSTAR MEDICAL PRODUCTS, INC.
 BIOTECHNICA INTERNATIONAL
 BIOTECHNOLOGY DEVELOPMENT COI
 BIOTHERAPEUTICS, INC.
 CALGENE
 CALIFORNIA BIOTECHNOLOGY, INC.
 CALIFORNIA INTEGRATED DIAGNOST
 CALZYME LABORATORIES, INC.
 CAMBRIDGE BIOSCIENCE CORP.
 CENTOCOR
 CETUS CORPORATION
 CHEMICON INTERNATIONAL, INC
 CHIRON CORPORATION
 COLLAGEN CORPORATION
 COORS BIOTECH PRODUCTS CO.
 COVALENT TECHNOLOGY CORP.
 CROP GENETICS INTERNATIONAL, NV
 CYANOTECH CORPORATION
 CYGNUS RESEARCH CORP.
 DIAGNON CORP.
 DIAGNOSTIC PRODUCTS, CORP.
 DIAMEDIX, INC.
 DNAX
 E-Y LABORATORIES, INC
 ELECTRO-NUCLEONICS, INC.
 EMBREX, INC.
 ENDOTRONICS, INC.
 ENZO BIOCHEM, INC.
 ENZYME TECHNOLOGY CORP.
 EPITOPE, INC.
 EXOVIR, INC.

PRODUCT AND PATENT DATA--SORTED BY COMPANY

CLASS NO.	SIZE FIN.	'81	'82	'83	'84	'85	'86	'87	'88	'81-'88 TOT. PRDS	APPS. PATENT
EMPL.											
K	113 L PRI			1	4	6				11	5
J	100 MJV PRI				1	1				8	30
K	29 M PRIV	0	0	0	0	2				2	10
K	17 S PUB					3				3	
P	185 L PUB										
S	11 S PRIV	1	2							3	0
F	107 MJ PRIV	0	0	0	1	2				8	3
H	30 M PUB	4	4	4	1	1				20	0
M	17 S PUB										20
A	153 L PUB									11	
P	25 M PRIV	1	1	1	1	3				30	50
P	17 S PUB	1	1	1	1	2				10	4
Q	55 M PUB	1	1	1	1	7				14	1
P	15 S PRIV	2	2	3	1	2				18	11
K	25 M PUB	0	0	0	0	0				20	0
S	65 M PUB	0	0	0	0	0				6	1
P	8 S PRI	0	0	0	0	0				0	17
D	200 L PUB	0	0	0	1	4				10	1
P	49 M PRI	1	1	2	3	4				35	40
S	44 M PRI	0	58	58	100	270				25	0
G	9 S PRI	0	0	0	0	100				200	0
S	70 M PRI	200				300				1286	
P	50 M PRI				2	2				2	
B	16 S PRI									10	
G	330 L PRIV										
K	53 M PRIV									500	
K	4 SU PRIV									10	14
P	7 S PRIV									4	
T	246 LU SUBS									2	
W	39 M PRIV	20	30	40	45	50				245	11
J	70 M PRIV					1				7	2
K	30 M SUBS	0	0	0	0	0				10	
K	5 S PRI									0	40
G										14	0

PRODUCT AND PATENT DATA--SORTED BY COMPANY

CLASS NO.	SIZE	FIN.	'81	'82	'83	'84	'85	'86	'87	'88	'81-'88	TOT.PRDS	APPS.
EMPL.			PRODUCTS PER YEAR							PATENT			
A	125	L	PUB	0	0	1	0	1	0	3	5	75	
K	136	L	PUB	0	1	2	3	3	3	5	22	2	
G	5	S	PRIV	0	0	0	0	0	0	2	4	3	
F	1	S	PRI	0	0	0	0	0	1	2	3	0	
K	180	L	PRI	0	0	0	0	50	55	90	100	200	
H	4	S	PRIV	1	1	1	1	1	2	3	13	0	
P	100	M	PRI	0	0	0	0	0	0	1	1	10	
T	6	S	PRI	0	0	0	0	0	0	1	4	1	
P	2	S	PRI	0	0	0	0	0	0	1	4	2	
B	18	L	PUB	1	1	1	1	1	2	2	6	6	
F	30	MU	SUBS	0	0	0	0	0	0	1	3	1	
W	25	M	PRI	0	0	0	0	0	0	0	0	12	
P	20	S	PRI	0	0	1	2	3	3	4	18	3	
B	63	M	PRIV	0	0	1	2	3	3	5	26	12	
B	85	M	PRI	2	3	4	3	3	1	5	17	1	
F	325	L	PRI	3	3	3	3	3	3	3	24	2	
T	6	S	PRIV	10	15	25	35	40	50	55	290	6	
K	12	S	PRI	0	0	0	0	0	0	0	1	1	
P	35	M	PUB	0	0	0	0	0	0	0	0	6	
S	160	LU	SUB	0	0	0	0	0	0	0	0	10	
B	40	M	PRI	0	0	0	0	0	0	0	0	3	
G	40	M	PRI	0	0	0	0	0	0	0	0	8	
K	89	M	PUB	0	0	0	0	0	0	0	0	10	
A	84	M	PUB	0	0	0	0	0	0	0	0	6	
K	1000	L	SUBS	10	10	10	10	10	10	10	70	10	
P	49	M	PUB	0	0	0	0	0	0	0	7	6	
X	4	S	PRIV	0	0	0	0	0	0	0	0	15	
P	140	LU	SUBS	0	0	0	0	0	0	0	0	15	
P	30	M	PRI	0	0	0	0	0	0	0	0	1	
B	192	L	PRI	0	0	0	0	0	0	0	0	13	
A	100	M	PUB	0	0	0	0	0	0	0	0	12	
O	80	M	PRI	0	0	0	0	0	0	0	0	0	
I	15	S	PRIV	0	0	0	0	0	0	0	0	0	

PRODUCT AND PATENT DATA--SORTED BY COMPANY

	CLASS NO.	EMPL.	SIZE	FIN.	'81	'82	'83	'84	'85	'86	'87	'88	'81-'88		APPS.
													TOT. PRDS	PATENT	
ZOECON CORP.(SANDOZ CROP PRO)	B	130	LU	SUBS	20	100	200	260	330	400	450	500	2260	3	70
ZYMED LABORATORIES, INC.	G	20	S	PRI											
ZYMOGENETICS, INC.	P	95	M	PRIV											

PRODUCT AND PATENT DATA--SORTED BY CO. CLASS

CLASS NO.	EMPL.	SIZE	FIN.	'81	'82	'83	'84	'85	'86	'87	'88	'81-'88	TOT. PRDS	PATENT	APPS.
CLASS NO.	EMPL.	SIZE	FIN.	'81	'82	'83	'84	'85	'86	'87	'88	'81-'88	TOT. PRDS	PATENT	APPS.
A	17	S	PRI			2	1	1	3	2	3	3	3	4	
A	17	S	PRI=								2	11	11		
A	125	L	PUB	0	0	1	0	1	0	3	3	5	5	75	
A	100	M	PUB						20	50	50	120	120	13	
A	84	M	PUB							4	14	18	18		
A	70	M	PUB	0	0	0	0	0	4	5	2	11	11	0	
B	50	M	PRI;					2	2	3	3	10	10		
B	40	M	PRI;							2	2	2	2	10	
B	7	S	PRI=				0	1	1	3	3	5	5	1	
B	20	S	PRI=											3	
B	92	L	PRI=	0	0	0	0	0	0	0	0	0	0	1	
B	63	M	PRIV	0	0	1	2	3	3	4	5	18	18	12	
B	49	M	PRIV					2	2			4	4		
B	165	L	PUB	0	0	0	0	0	0	0	0	0	0	28	
B	145	L	PUB			1	1	1	1	2	2	6	6	6	
B	65	MJ	PUB	0	0	0	0	0	0	2	2	2	2	40	
B	130	LU	SUBS	0	0	0	0	0	0	0	2	2	2	20	
B	10	S	PRI=			2	3	4	6	9	12	36	36	3	
D	8	S	PRI=								10	10	10	1	
D	15	S	PRIV				1			1	1	3	3	2	
E	8	S	PRIV	0	0	10	50	100	168	170	190	688	688	3	
E	15	S	PRIV					2	8	10	12	32	32	6	
F	5	S	PRI						1	2	4	7	7	2	
F	25	M	PRI											1	
F	18	S	PRI							1	2	3	3	1	
F	1	S	PRI=	0	0	0	0	1	2	2	3	8	8	3	
F	85	M	PRI=	2	3	4	3	3	1	5	5	26	26	0	
F														1	

EMBREX, INC.
 IMMUCELL CORPORATION
 MOLECULAR GENETICS, INC.
 UNIVERSITY GENETICS CO.
 SYNTRO CORP.
 DIAGNON CORP.
 INTERN'TL PLANT RESEARCH INST.
 SEPRACOR, INC.
 BENTECH LABORATORIES
 PHYTOGEN
 UNITED AGRISEEDS INC
 PLANT GENETICS, INC.
 CROP GENETICS INTERNATIONAL,NV
 CALGENE
 NPI
 BIOTECHNICA INTERNATIONAL
 AGRACETUS
 ZOECON CORP.(SANDOZ CROP PRO)
 BIOCHEM TECHNOLOGY INC
 INTEGRATED CHEMICAL SENSORS
 BIOMATERIALS INTERNATIONAL,INC
 A/G TECHNOLOGY CORP.
 BIOPROBE INTERNATIONAL, INC.
 APPLIED PROTEIN TECHNOL. INC
 BIO-TECHNICAL RESOURCES, INC.
 NYGENE CORP.
 HP GENENCHEM
 MULTIPLE PEPTIDE SYSTEMS INC
 QUEUE SYSTEMS INC

CLASS NO.	EMPL.	SIZE	FIN.	'81	'82	'83	'84	'85	'86	'87	'88	TOT. PRDS	'81-'88	APPS.
				PRODUCTS PER YEAR								PATENT		
F	155	L	PUB.	0	0	0	0	0	0	0	0	0	0	20
F	35	M	PUB.	0	0	0	0	0	0	0	0	0	0	0
G	44	M	PRI	200	200	200	200	200	200	200	200	200	200	0
G	16	S	PRI	2	2	2	2	2	4	4	4	14	14	0
G	5	S	PRI	20	100	200	260	330	400	450	500	2260	2260	0
G	20	S	PRI	20	100	200	260	330	400	450	500	2260	2260	0
G	40	M	PRI	20	100	200	260	330	400	450	500	2260	2260	3
G	17	S	PRIV	10	50	10	50	500	500	2K	2K	560	560	3
G	8	S	PRIV	0	0	0	0	0	0	2	4	6	6	2
G	5	S	PRIV	25	40	55	65	85	140	200	230	840	840	2
G	270	L	PUB	0	0	1	2	2	2	4	8	16	16	2
G	21	M	PUB	0	0	1	2	2	2	4	8	19	19	3
H	9	S	PRI	4	4	4	4	1	1	1	1	20	20	0
H	107	L	PRIV	1	1	1	1	1	2	3	3	13	13	0
H	4	S	PRIV	1	1	1	1	1	2	3	3	13	13	0
I	10	S	PRI	3	29	35	45	70	90	105	115	501	501	2
J	100	MJV	PRI	12	29	35	45	70	90	105	115	501	501	30
J	7	S	PRI	0	0	0	0	5	20	30	30	85	85	0
J	8	S	PRI	0	0	0	0	5	20	30	30	85	85	0
J	10	S	PRIV	50	50	50	50	70	70	70	70	360	360	2
J	39	M	PRIV	3	5	6	6	6	6	6	8	28	28	0
J	15	S	PRIV	8	8	8	8	8	8	8	8	100	100	3
K	9	S	PRI	0	0	0	0	0	0	0	0	0	0	4
K	70	M	PRI	0	0	0	0	0	0	0	0	0	0	5
K	30	M	PRI	0	0	0	0	0	0	0	0	0	0	6
K	30	M	PRI	0	0	0	0	0	0	0	0	0	0	0
K	113	L	PRI	0	0	0	0	0	0	0	0	0	0	14
K	6	S	PRI	0	0	0	0	0	0	0	0	0	0	0
K	12	S	PRI	0	0	0	0	0	0	0	0	0	0	0
K	53	M	PRI	2	6	60	60	60	60	60	60	138	138	0
K	30	M	PRI	2	6	60	60	60	60	60	60	138	138	14

CLASS NO.	NO.	SIZE	FIN.	'81	'82	'83	'84	'85	'86	'87	'88	TOT. PRDS	'81-'88	APPS.
	EMPL.													PATENT
				PRODUCTS PER YEAR										
K	12	S	PRI=	0	0	0	0	50	55	90	100	1	1	1
K	180	L	PRI=	0	0	0	1	2	3	5	7	295	200	2
K	9	S	PRIV	0	0	0	1	1	1	2	4	9	5	5
K	50	M	PRIV	2	2	3	1	2	1	4	5	20	0	0
K	15	S	PRIV											
K	70	M	PRIV											
K	330	L	PRIV						500			500		5
K	22	SJ	PRIV	0	0	0	0	0	0	2	1	2	10	12
K	29	M	PRIV											
K	30	M	PUB											
K	17	S	PUB											
K	89	M	PUB											
K	136	L	PUB	1	2	3	3	3	3	5	10	30	8	2
K	55	M	PUB											
K	110	L	PUB	15	25	40	75	92	100	110	120	577	330	5
K	720	L	PUB	1								2		
K	17	SU	SUB											1
K	30	M	SUB	0	0	0	0	0	0	0	0	0	40	40
K	1000	L	SUB	10	10	10	10	10	10	10	3	70	10	10
K	16	S	SUB	0	0	0	1	2	3	4	5	15	3	3
M	23	M	PRI=											20
M	30	M	PUB											10
M	185	LU	SUB											12
O	80	M	PRI=											10
O	25	M	PRIV	0	0	0	0	0	20	40	60	120	0	0
O	26	MU	SUB	0	1	2	2	2	2	2	6	9	2	2
P	5	S	PRI											
P	4	SU	PRI											
P	2	S	PRI											
P	70	M	PRI=											
P	6	S	PRI=	0	0	0	0	0	0	0	1	1	0	0

RECOMTEX CORP.

MUREX CORP.

AMERICAN DIAGNOSTICA, INC.

ANGENICS

IMMUNOTECH CORP.

MICROGENICS

KALLESTAD LABORATORIES

AGRI-DIAGNOSTICS ASSOCIATES

GENESIS LABS, INC.

ADVANCED MAGNETICS, INC.

GENETIC DIAGNOSTICS CORP.

SYNBIOTICS CORP.

MONOCLONAL ANTIBODIES, INC.

CAMBRIDGE BIOSCIENCE CORP.

ENZO BIOCHEM, INC.

ELECTRO-NUCLEONICS, INC.

CALIFORNIA INTEGRATED DIAGNOST

MOLECULAR DIAGNOSTICS, INC.

SYVA CO

COVALENT TECHNOLOGY CORP.

CYANOTECH CORPORATION

IGENE BIOTECHNOLOGY INC.

COORS BIOTECH PRODUCTS CO.

VERAX CORP.

BALL BIOTECH COMPANY

ENZYME TECHNOLOGY CORP.

AMERICAN BIOTECHNOLOGY CO

LUCKY BIOTECH CORPORATION

NORTH COAST BIOTECHNOLOGY INC

INTERFERON SCIENCES, INC.

AUTOMEDIX SCIENCES, INC

CLASS NO.	NO.	SIZE	FIN.	'81	'82	'83	'84	'85	'86	'87	'88	'81-'88	TOT. PRDS	APPS.
	EMPL.			PRODUCTS PER YEAR								1	17	10
				'81	'82	'83	'84	'85	'86	'87	'88			
P	100	M	PRI=					0	0	0	0	1	1	10
P	325	L	PRI=			0	0	0	1	3	5	8	17	
P	25	M	PRI=	0	0	0	0	0	0	0	0	0	0	12
P	30	M	PRI=	0	0	0	0	0	0	0	0	0	0	15
P	26	M	PRIV										0	
P	25	M	PRIV	1	1	1	1	1	1	2	2	2	10	4
P	95	M	PRIV											70
P	155	L	PUB	0	0	0	0	0	0	0	0	0	0	100
P	200	L	PUB	0	0	0	0	1	4	10	20	20	35	40
P	246	L	PUB		1	1	1	1	1	3			8	
P	65	M	PUB	0	0	0	0	0	0	0	0	0	0	17
P	49	M	PUB						7				7	6
P	360	L	Pub=				1	1	1	1	1	1	5	530
P	185	L	PUB											
P	153	L	PUB				2	4	6	8	10	10	30	50
P	675	L	PUB									1	1	250
P	9	S	PUB											2
P	120	L	PUB											2
P	35	M	PUB	10	15	25	35	40	50	55	60	60	290	6
P	5	S	PUB	0	0	0	0	0	0	1	1	1	1	5
P	215	L	Publ					6	6	2	2	2	16	300
P	81	MU	PUB	0	0	0	0	0	0	0	0	0	0	20
P	55	M	PUB					1	7	5	5	5	18	11
P	220	L	PUB							3	4	4	7	450
P	140	LU	SUBS				2	3	1	4	5	5	15	15
P	17	S	PRI=		1	1	1	1	2	3	5	5	14	1
R	14	S	PRIV	0	0	0	0	0	0	1	2	2	3	2
S	8	S	PRI	20	20	30	30	100	100	150	200	200	650	0
S	9	S	PRI		0	58	58	100	270	300	500	1286		0
S	15	S	PRI=											3
S	15	S	PRI=						1		1	1	2	3

NEORX CORP.

QUIDEL

PHARMATEC, INC

UNIGENE LABORATORIES, INC.

AMERICAN LABORATORIES, INC

IMMUNO MODULATORS LABS. INC

ZYMOGENETICS, INC.

CALIFORNIA BIOTECHNOLOGY, INC.

INTEGRATED GENETICS, INC.

CENTOCOR

INGENE, INC.

T-CELL SCIENCES

BIOGEN

GENZYME CORP.

IMMUNEX CORP.

CETUS CORPORATION

ALPHA I BIOMEDICALS

BIOTHERAPEUTICS, INC.

RIBI IMMUNOCHEM RESEARCH, INC.

EXO VIR, INC.

AMGEN

DNAX

IMMUNOMEDICS, INC.

CHIRON CORPORATION

TRITON BIOSCIENCES, INC.

IMMUNOMED

ADVANCED MINERAL TECHNOLOGIE

BETHYL LABS INC.

INTER-CELL TECHNOLOGIES, INC.

CYGNUS RESEARCH CORP.

BIOPOLYMERS, INC.

CLASS NO.	SIZE FIN.	EMPL.	PRODUCTS PER YEAR										'81-'88 TOT. PRDS	APPS. PATENT	
			'81	'82	'83	'84	'85	'86	'87	'88					
INTELLI-GENETICS BERKELEY ANTIBODY E-Y LABORATORIES, INC GLEN MILLS, INC. COLLAGEN CORPORATION BIOSPHERICS INFERGE NE COMPANY RICERCA, INC NEUSHUL MARICULTURE R & A PLANT/SOIL INC. MARICULTURA, INC. AMTRON BIOLOGICS CORP BIOMATRIX, INC. OTSUKA PHARMACEUTICAL CO MELOY LABORATORIES, INC. TRANSFORMATION RESEARCH INC.	S	49	M	PRI=	1	1	2	3	3	4	5	6	25	0	
	S	20	S	PRIV	1				2	1	1		5	2	
	S	20	S	PRIV											
	S	11	S	PRIV	1	2							3	0	
	S	225	L	PUB	2	2	3	3	4	4	6		24	25	
	S	250	L	PUB	3	3	3	3	3	3	2	3	23	5	
	S	25	M	PUB							2	4	6	1	
	S	160	LU	SUB											
	T	6	S	PRI	0	0	0	0	0	0	1	3	4	1	
	T	6	S	PRIV	3	3	3	3	3	3	3	3	24	2	
T	7	S	PRIV						2	2	2	2			
V	16	S	PRIV						2	2	6	8	35		
V	85	MU	SUB					1	1			2	0		
W		M	PRIV										1		
W	30	MU	SUBS												
W	246.	LU	SUBS	20	30	40	45	50	40	20	0	245	11		
X	4	S	PRIV												
PRODUCT AND PATENT DATA															
ALL COMPANIES	YEAR		'81	'82	'83	'84	'85	'86	'87	'88	'81-'88	APPS			
	AVERAGE		3.12	8.6	9.8	11.6	14.1	28.2	20.1	28.6	87.6	27.3			
	LOW		0	0	0	0	0	0	0	0	0	0			
	HI		25	200	200	260	330	500	450	500	2260	530			
	COUNT		49	59	61	72	82	92	103	89	117	111			
SMALL COMPANIES MEDIUM SIZED COMPANIES LARGE COMPANIES	MEDIAN									11	3				
	AVERAGE		3.5	17.4	17.7	20.8	29.0	52.4	35.0	50.7	154.3	2.5			
	AVERAGE		.07	1.2	2.0	4.6	4.8	5.6	9.7	12.5	30.2	10.1			
	AVERAGE		5.6	6.5	8.9	9.8	13.4	35.4	19.9	27.2	99.7	93.0			

CLASS NO.	EMPL.	SIZE FIN.	PRODUCTS PER YEAR								TOT. PRDS		APPS.
			'81	'82	'83	'84	'85	'86	'87	'88	'81-'88	APPS	
PRIVATELY HELD COMPANIES													
	YEAR		'81	'82	'83	'84	'85	'86	'87	'88	'81-'88	APPS	
	39.6 AVERAGE		2.2	10.0	10.7	13.6	18.3	38.9	25.4	35.6	109.7	8.5	
PUBLICLY HELD COMPANIES													
	147.0 AVERAGE		3.7	4.9	7.3	9.0	9.9	14.1	16.6	22.9	64.7	69.9	
SUBSIDIARIES													
	172.1 AVERAGE		7.5	10.3	13.0	11.8	11.3	8.1	5.7	2.8	45.1	8.4	
ANIMAL AGRICULTURE--A													
	YEAR		'81	'82	'83	'84	'85	'86	'87	'88	'81-'88	APPS	
	AVERAGES		0.0	0.0	1.0	0.3	0.7	6.8	12.8	14.2	28.0	23.0	
PLANT AGRICULTURE--B													
			0.0	0.0	0.3	0.4	1.0	1.0	1.8	2.0	4.9	12.4	
REAGENTS--G													
			15.0	85.0	53.4	54.1	72.2	176.2	109.7	142.0	492.6	1.7	
SPECIALTY CHEMICALS--J													
			6.0	10.7	28.3	24.5	22.2	37.4	35.7	38.0	164.8	6.4	
DIAGNOSTICS, HUMAN--K													
			3.4	4.1	5.5	11.7	14.7	37.0	14.4	21.4	75.2	30.2	
THERAPEUTICS--P													
			1.1	1.4	2.3	2.6	3.3	4.3	4.5	6.0	18.6	80.0	

PATENT DATA 1981-1987

Company Name	year	cl	size	fin	'81	'82	'83	'84	'85	'86	'87	apps
AG TECHNOLOGY CORP.	1981	E	S	PRI	0	0	0	0	0	1		3
ADVANCED BIOTECHNOLOGIES	1982	G	S	PRI								
ADVANCED MAGNETICS, INC.	1981	K	M	PUE	0	0	0	0	1	1	6	12
ADVANCED MINERAL TECHNOLOGIES	1982	R	S	PRI	0	0	0	0	0	0	1	2
AGDIA, INC.	1981	B	S	PRI								
AGRACETUS	1981	B	MJV	PRI	0	0	0	0	4	4	6	20
AGRI-DIAGNOSTICS ASSOCIATES	1984	K	SJ	PRI	0	0	0	0	0	0	0	5
AGRITTECH SYSTEMS, INC	1984	K	M	PRI							3	3
ALPHA I BIOMEDICALS	1982	P	S	PUE				1	2	0	2	2
AMERICAN BIOGENETICS CORP	1984	I	S	PRI								2
AMERICAN BIOTECHNOLOGY CO	1984	P	S	PRI				0	1	2	1	2
AMERICAN DIAGNOSTICA, INC.	1983	K	S	PRI								2
AMERICAN LABORATORIES, INC	1962	P	M	PRI								
AMGEN	1980	P	L	PUE	0	0	0	0	0	5	6	300
AMTRON	1981	V	S	PRI			1			4	25	35
ANGENICS	1980	K	M	PRI	0	0	0	1	0	2	2	5
ANTIVIRALS, INC	1980	K	S	PRI							1	6
APPLIED PROTEIN TECHNOL INC	1984	F	S	PRI							2	2
AUTOMEDIX SCIENCES, INC	1978	P	S	PRI	0	2	2	2	3	0	1	0
BALL BIOTECH COMPANY	1985	O	M	PRI	0	0	0	0	0	0	10	10
BENTECH LABORATORIES	1984	B	S	PRI					1			1
BERKELEY ANTIBODY	1983	S	S	PRI	0	0	0	0	0	1	1	2
BETHYL LABS INC.	1977	S	S	PRI	0	0	0	0	0	0	0	0
BINAX, INC	1986	K	S	PRI						0	0	0
BIO-TECHNICAL RESOURCES, INC.	1962	F	M	PRI							1	1
BIOCHEM TECHNOLOGY INC	1977	D	S	PRI				1		1	2	3
BIOGEN	1979	P	L	PUE	0	0	0	0	1	0		530
BIOGENEX LABORATORIES	1981	K	M	PRI								
BIOLOGICS CORP	1966	V	MU	SUE								0
BIOMATERIALS INTERNATIONAL, INC	1981	D	S	PRI	0	1	1	6	1	0	3	2
BIOMATRIX, INC.	1981	W	M	PRI	2			1	1	3	3	
BIOMEDICAL TECHNOLOGIES	1981	J	S	PRI								0
BIONIQUE LABS INC.	1982	H	S	PRI	0	1	0	0	0	0	1	3
BIOPOLYMERS, INC.	1984	S	S	PRI						1	1	3
BIOPROBE INTERNATIONAL, INC.	1983	E	S	PRI						1	3	6
BIOSCIENCE MANAGEMENT INC.	1984	J	S	PRI	0	0	0	0	0	0	9	0
BIOSPHERICS	1967	S	L	PUE	2	1	1	1	1			5
BIOSTAR MEDICAL PRODUCTS, INC.	1983	K	M	PRI			0	1	4	0	1	
BIOTECHNICA INTERNATIONAL	1981	B	L	PUE	0	0	0	0	0	1	2	40
BIOTECHNOLOGY DEVELOPMENT COF	1982	F	M	PUE	0	0	0	0	0	0		0
BIO-THERAPEUTICS, INC.	1984	P	L	PUE	0	0	0	0	0	0	0	2
CALGENE, INC.	1980	B	M	PUE					1	2	6	28
CALIFORNIA BIOTECHNOLOGY INC.	1981	P	L	PUE						3		100
CALIFORNIA INTEGRATED DIAGNOST	1981	K	SU	SUE							1	1
CALZYME LABORATORIES, INC.	1983	J	S	PRI								
CAMBRIDGE BIOSCIENCE CORP.	1981	K	M	PUE								5
CENTOCOR	1979	P	L	PUE								
CETUS CORPORATION	1971	P	L	PUE	6	2	2	6	12	19	20	250
CHEMICON INTERNATIONAL, INC	1981	G	S	PRI	0	0	0	0	0	0	0	
CHIRON CORPORATION	1981	P	L	PUE				1	2	2	5	450
COLLAGEN CORPORATION	1975	S	L	PUE	1	0	0	6	3	5	5	25
COORS BIOTECH PRODUCTS CO.	1984	M	LU	SUE							3	10
COVALENT TECHNOLOGY CORP.	1981	K	S	SUE							2	1
CROP GENETICS INTERNATIONAL NV	1961	B	M	PRI								

PATENT DATA 1981-1987

Company Name	year	cl	size	fin	'81	'82	'83	'84	'85	'86	'87	apps
CYANOTECH CORPORATION	1983	M	M	PRI	0	0	0	0	0	0		3
CYGNUS RESEARCH CORP.	1985	S	S	PRI								3
DIAGNOCORP.	1981	A	M	PUE	0	0	0	0	0	0	0	0
DIAGNOSTIC PRODUCTS, CORP.	1972	G	L	PUE	1						2	2
DIAMEDIX, INC.	1986	K	M	PRI				1		1		4
DNAX	1980	P	MU	PUE	0	0	0	0	0	1	4	20
E-Y LABORATORIES, INC	1978	S	S	PRI								
ELECTRO-NUCLEONICS, INC.	1960	K	L	PUE								
EMBEX, INC.	1985	A	S	PRI					1	1	3	4
ENDOTRONICS, INC.	1981	F	L	PUE						3	5	20
ENZO BIOCHEM, INC.	1976	K	L	PUE	0	0	0	0	0	0	5	330
ENZYME TECHNOLOGY CORP.	1981	O	MU	SUE	0	0	0	0	0	0	0	0
EPITOPE, INC.	1979	G	M	PUE							2	2
EXOVIR, INC.	1981	P	S	PUE					1		3	5
GEN-PROBE, INC.	1984	K	M	PRI	0	0	0	0	0	0	1	5
GENENCOR, INC.	1982	J	MJV	PRI				1	2	3	4	30
GENESIS LABS, INC.	1984	K	M	PRI	0	0	0	1	0	0	0	10
GENETIC DIAGNOSTICS CORP.	1981	K	S	PUI				1	2	3	2	
GENZYME CORP.	1981	P	L	PUI								
GLEN MILLS, INC.	1980	S	S	PRI	0	0	0	0	0	0	0	0
HP GENENCHEM	1983	F	MJ	PRI	0	0	0	0	0	0	0	3
HYCLONE LABORATORIES	1975	H	L	PRI	0	0	0	0	0	0	0	0
IGENE BIOTECHNOLOGY INC.	1981	M	M	PUE	0	0	1	1	3			20
IMMUCELL CORPORATION	1982	A	S	PRI								SEC
IMMUNEX CORP.	1981	P	L	PUE	0	0	5	2	1	2	5	50
IMMUNO MODULATORS LABS. INC	1981	P	M	PRI				2			2	4
IMMUNOMED	1979	Q	S	PRI						1	1	1
IMMUNOMEDICS, INC.	1983	P	M	PUE		3	3	1	1	2	6	11
IMMUNOTECH CORP.	1980	K	S	PRI	0	0	0	0	0	0	0	0
INFERGENE COMPANY	1983	S	M	PUE							1	1
INGENE, INC.	1980	P	M	PUE	0	0	0	0	0	0	0	17
INTEGRATED CHEMICAL SENSORS	1984	D	S	PRI							1	1
INTEGRATED GENETICS, INC.	1981	P	L	PUE	0	0	0	0	0	2	4	40
INTELLI-GENETICS	1980	S	M	PRI	0	0	0	0	0	0	0	0
INTER-CELL TECHNOLOGIES, INC.	1982	S	S	PRI		0	0	0	0	0	0	0
INTERFERON SCIENCES, INC.	1981	P	M	PRI								
INTERN'L PLANT RESEARCH INST.	1978	B	M	PRI		2		1			1	
JACKSON IMMUNORESEARCH LAB	1982	G	S	PRI		0	0	0	0	0	0	0
KALLESTAD LABORATORIES	1967	K	L	PRI								
LIFECODES CORP.	1982	K	M	PRI						2	5	14
LUCKY BIOTECH CORP.	1984	P	SU	SUE					0	0		
MARICULTURA, INC.	1986	T	S	PRI								
MELOY LABORATORIES, INC.	1970	W	LU	SUE	2	1	1	1	0	0		11
MICROBIO RESOURCES	1981	J	M	PRI	0	0	0	0	0	1	4	2
MICROGENICS	1981	K	M	PRI							2	
MOLECULAR DIAGNOSTICS, INC.	1980	K	M	SUE					1	3	10	40
MOLECULAR GENETIC RESOURCES	1983	G	S	PRI								0
MOLECULAR GENETICS, INC	1979	A	L	PUI	0	0	0	2	3	4	2	75
MONOCLONAL ANTIBODIES, INC.	1979	K	L	PUE	0	0	0	0	0	0	2	2
MONOCLONETICS INTERNAT'L, INC.	1984	G	S	PRI								3
MULTIPLE PEPTIDE SYSTEMS INC	1986	F	S	PRI	0	0	0	0	0	0	0	0
MUREX CORP.	1984	K	L	PRI	0	0	0	0	0	1	3	200
MYCOSEARCH, INC.	1979	H	S	PRI	0	0	0	0	0	0	0	0
NEORX CORP.	1984	P	M	PRI					0	0	3	10

PATENT DATA 1981-1987

Company Name	year	cl	size	fin	'81	'82	'83	'84	'85	'86	'87	apps
NEUSHUL MARICULTURE	1978	T	S	PRI							2	1
NORTH COAST BIOTECHNOLOGY INC	1986	P	S	PRI							1	2
NPI	1973	B	L	PUE								6
NYGENE CORP.	1985	F	S	PRI							1	1
PHARMATEC, INC	1982	P	M	PRI	0	0	0	1	1	2	3	12
PHYTOGEN	1980	B	S	PRI			1	1	1			3
PLANT GENETICS, INC.	1981	B	M	PRI	0	0	0	0	2	1	1	12
QUEUE SYSTEMS INC	1980	F	M	PRI	2			1				1
QUIDEL	1981	P	L	PRI	0	0	0	2	1	0		
R & A PLANT/SOIL INC.	1978	T	S	PRI							2	2
RECOMTEX CORP.	1981	K	S	PRI							1	1
RIBI IMMUNOCHEM RESEARCH, INC	1981	P	M	PUE	0	0	0	5	5	3	2	6
RICERCA, INC	1986	S	LU	SUE								
SEPRACOR, INC.	1984	B	M	PRI							2	10
STRATAGENE CLONING SYSTEMS	1984	G	M	PRI							0	3
SYNBIOTICS CORP.	1982	K	M	PUE					2		3	8
SYNTRO CORP.	1981	A	M	PUE								
SYVACO	1966	K	LU	SUE	10	10	10	10	10	10	10	10
T-CELL SCIENCES	1983	P	M	PUE								6
TRANSFORMATION RESEARCH INC.	1981	X	S	PRI								
TRITON BIOSCIENCES, INC.	1983	P	LU	SUE					3	3	5	15
UNIGENE LABORATORIES, INC.	1980	P	M	PRI	0	0	0	0	0	0	2	15
UNITED AGRISEEDS INC	1981	B	L	PRI	0	0	0	0	0	0	1	1
UNIVERSITY GENETICS CO.	1981	A	M	PUE	0	1	1	2	3	3		13
VERAX CORP.	1979	O	M	PRI	0	0	0	0	0	0	6	12
WESTBRIDGE RESEARCH GROUP	1982	J	S	PRI	0	0	0	0	0	0	0	0
ZOECON CORP.(SANDOZ CROP PRO)	1968	B	LU	SUE				1				3
ZYMED LABORATORIES, INC.	1980	G	S	PRI								
ZYMOGENETICS, INC.	1981	P	M	PRI						0	2	70
AVE					0.4	0.4	0.5	0.88	1.1	1.38	2.8	27.3
LO					0	0	0	0	0	0	0	0
HI					10	10	10	10	12	19	25	530
COUNT					58	59	61	73	75	80	93	111
SUM					26	24	29	64	81	110	262	3035

PATENT DATA 1981-1987--SORTED BY CLASSIFICATION

Company Name	year	cl	size	fin	'81	'82	'83	'84	'85	'86	'87	apps
AMERICAN DIAGNOSTICA, INC.	1983	K	S	PRI								2
ANGENICS	1980	K	M	PRI	0	0	0	1	0	2	2	5
ANTIVIRALS, INC	1980	K	S	PRI							1	6
BINAX, INC	1986	K	S	PRI						0	0	0
BIOGENEX LABORATORIES	1981	K	M	PRI								
BIOSTAR MEDICAL PRODUCTS, INC.	1983	K	M	PRI				0	1	4	0	1
CALIFORNIA INTEGRATED DIAGNOST	1981	K	SU	SUE							1	1
CAMBRIDGE BIOSCIENCE CORP.	1981	K	M	PUE								5
COVALENT TECHNOLOGY CORP.	1981	K	S	SUE							2	1
DIAMEDIX, INC.	1986	K	M	PRI				1		1		4
ELECTRO-NUCLEONICS, INC.	1960	K	L	PUE								
ENZO BIOCHEM, INC.	1976	K	L	PUE	0	0	0	0	0	0	5	330
GEN-PROBE, INC.	1984	K	M	PRI	0	0	0	0	0	0	1	5
GENESIS LABS, INC.	1984	K	M	PRI	0	0	0	1	0	0	0	10
GENETIC DIAGNOSTICS CORP.	1981	K	S	PUE				1	2	3	2	
IMMUNOTECH CORP.	1980	K	S	PRI	0	0	0	0	0	0	0	0
KALLESTAD LABORATORIES	1967	K	L	PRI								
LIFECODES CORP.	1982	K	M	PRI							2	5
MICROGENICS	1981	K	M	PRI								2
MOLECULAR DIAGNOSTICS, INC.	1980	K	M	SUE					1	3	10	40
MONOCLONAL ANTIBODIES, INC.	1979	K	L	PUE	0	0	0	0	0	0	2	2
MUREX CORP.	1984	K	L	PRI	0	0	0	0	0	1	3	200
RECOMTEX CORP.	1981	K	S	PRI							1	1
SYNBIOTICS CORP.	1982	K	M	PUE					2		3	8
SYVA CO	1966	K	LU	SUE	10	10	10	10	10	10	10	10
COORS BIOTECH PRODUCTS CO.	1984	M	LU	SUE							3	10
CYANOTECH CORPORATION	1983	M	M	PRI	0	0	0	0	0	0		3
IGENE BIOTECHNOLOGY INC.	1981	M	M	PUE	0	0	1	1	3			20
BALL BIOTECH COMPANY	1985	O	M	PRI	0	0	0	0	0	0	10	10
ENZYME TECHNOLOGY CORP.	1981	O	MU	SUE	0	0	0	0	0	0	0	0
VERAX CORP.	1979	O	M	PRI	0	0	0	0	0	0	6	12
ALPHA I BIOMEDICALS	1982	P	S	PUE				1	2	0	2	2
AMERICAN BIOTECHNOLOGY CO	1984	P	S	PRI				0	1	2	1	2
AMERICAN LABORATORIES, INC	1962	P	M	PRI								
AMGEN	1980	P	L	PUE	0	0	0	0	0	5	6	300
AUTOMEDIX SCIENCES, INC	1978	P	S	PRI	0	2	2	2	3	0	1	0
BIOGEN	1979	P	L	PUE	0	0	0	0	1	0		530
BIOTHERAPEUTICS, INC.	1984	P	L	PUE	0	0	0	0	0	0	0	2
CALIFORNIA BIOTECHNOLOGY INC.	1981	P	L	PUE						3		100
CENTOCOR	1979	P	L	PUE								
CETUS CORPORATION	1971	P	L	PUE	6	2	2	6	12	19	20	250
CHIRON CORPORATION	1981	P	L	PUE				1	2	2	5	450
DNAX	1980	P	MU	PUE	0	0	0	0	0	1	4	20
EXOVIIR, INC.	1981	P	S	PUE					1		3	5
GENZYME CORP.	1981	P	L	PUE								
IMMUNEX CORP.	1981	P	L	PUE	0	0	5	2	1	2	5	50
IMMUNO MODULATORS LABS. INC	1981	P	M	PRI				2			2	4
IMMUNOMEDICS, INC.	1983	P	M	PUE		3	3	1	1	2	6	11
INGENE, INC.	1980	P	M	PUE	0	0	0	0	0	0	0	17
INTEGRATED GENETICS, INC.	1981	P	L	PUE	0	0	0	0	0	2	4	40
INTERFERON SCIENCES, INC.	1981	P	M	PRI								
LUCKY BIOTECH CORP.	1984	P	SU	SUE					0	0		
NEORX CORP.	1984	P	M	PRI				0	0	0	3	10
NORTH COAST BIOTECHNOLOGY INC	1986	P	S	PRI							1	2

PATENT DATA 1981-1987--SORTED BY CLASSIFICATION

Company Name	year	cl	size	fin	'81	'82	'83	'84	'85	'86	'87	apps
DIAGNOCORP.	1981	A	M	PUE	0	0	0	0	0	0	0	0
EMBRX, INC.	1985	A	S	PRI					1	1	3	4
IMMUCELL CORPORATION	1982	A	S	PRI								SEC
MOLECULAR GENETICS, INC	1979	A	L	PUE	0	0	0	2	3	4	2	75
SYNTRO CORP.	1981	A	M	PUE	0	1	1	2	3	3		13
UNIVERSITY GENETICS CO.	1981	B	S	PRI								
AGDIA, INC.	1981	B	MJV	PRI	0	0	0	0	4	4	6	20
AGRACETUS	1984	B	S	PRI					1			1
BENTECH LABORATORIES	1981	B	L	PUE	0	0	0	0	0	1	2	40
BIOTECHNICA INTERNATIONAL	1980	B	M	PUE					1	2	6	28
CALGENE, INC.	1981	B	M	PRI								
CROP GENETICS INTERNATIONAL NV	1978	B	M	PRI		2		1			1	
INTERN'L PLANT RESEARCH INST.	1973	B	L	PUE								6
NPI	1980	B	S	PRI			1	1	1			3
PHYTOGEN	1981	B	M	PRI	0	0	0	0	2	1	1	12
PLANT GENETICS, INC.	1984	B	M	PRI							2	10
SEPRACOR, INC.	1981	B	L	PRI	0	0	0	0	0	0	1	1
UNITED AGRISEEDS INC	1968	B	LU	SUE				1				3
ZOECON CORP. (SANDOZ CROP PRO)	1977	D	S	PRI				1		1	2	3
BIOCHEM TECHNOLOGY INC	1981	D	S	PRI	0	1	1	6	1	0	3	2
BIOMATERIALS INTERNATIONAL, INC	1984	D	S	PRI							1	1
INTEGRATED CHEMICAL SENSORS	1981	E	S	PRI	0	0	0	0	0	1		3
AG TECHNOLOGY CORP.	1983	E	S	PRI						1	3	6
BIOPROBE INTERNATIONAL, INC.	1984	F	S	PRI							2	2
APPLIED PROTEIN TECHNOL INC	1962	F	M	PRI							1	1
BIO-TECHNICAL RESOURCES, INC.	1982	F	M	PUE	0	0	0	0	0	0		0
BIOTECHNOLOGY DEVELOPMENT COF	1981	F	L	PUE						3	5	20
ENDOTRONICS, INC.	1983	F	MJ	PRI	0	0	0	0	0	0	0	3
HP GENENCHEM	1986	F	S	PRI	0	0	0	0	0	0	0	0
MULTIPLE PEPTIDE SYSTEMS INC	1985	F	S	PRI							1	1
NYGENE CORP.	1980	F	M	PRI	2			1				1
QUEUE SYSTEMS INC	1982	G	S	PRI								
ADVANCED BIOTECHNOLOGIES	1981	G	S	PRI	0	0	0	0	0	0	0	
CHEMICON INTERNATIONAL, INC	1972	G	L	PUE	1						2	2
DIAGNOSTIC PRODUCTS, CORP.	1979	G	M	PUE							2	2
EPITOPE, INC.	1982	G	S	PRI		0	0	0	0	0	0	0
JACKSON IMMUNORESEARCH LAB	1983	G	S	PRI								0
MOLECULAR GENETIC RESOURCES	1984	G	S	PRI								3
MONOCLONETICS INTERNATL, INC.	1984	G	M	PRI							0	3
STRATAGENE CLONING SYSTEMS	1980	G	S	PRI								
ZYMED LABORATORIES, INC.	1982	H	S	PRI	0	1	0	0	0	0	1	3
BIONIQUE LABS INC.	1975	H	L	PRI	0	0	0	0	0	0	0	0
HYCLONE LABORATORIES	1979	H	S	PRI	0	0	0	0	0	0	0	0
MYCOSEARCH, INC.	1984	I	S	PRI								2
AMERICAN BIOGENETICS CORP	1981	J	S	PRI								0
BIOMEDICAL TECHNOLOGIES	1984	J	S	PRI	0	0	0	0	0	0	9	0
BIOSCIENCE MANAGEMENT INC.	1983	J	S	PRI								
CALZYME LABORATORIES, INC.	1982	J	MJV	PRI				1	2	3	4	30
GENENCOR, INC.	1981	J	M	PRI	0	0	0	0	0	1	4	2
MICROBIO RESOURCES	1982	J	S	PRI	0	0	0	0	0	0	0	0
WESTBRIDGE RESEARCH GROUP	1981	K	M	PUE	0	0	0	0	1	1	6	12
ADVANCED MAGNETICS, INC.	1984	K	SJ	PRI	0	0	0	0	0	0	0	5
AGRI-DIAGNOSTICS ASSOCIATES	1984	K	M	PRI							3	3
AGRITTECH SYSTEMS, INC												

PATENT DATA 1981-1987--SORTED BY CLASSIFICATION

Company Name	year	cl	size	fin	'81	'82	'83	'84	'85	'86	'87	apps
PHARMATEC, INC	1982	P	M	PRI	0	0	0	1	1	2	3	12
QUIDEL	1981	P	L	PRI	0	0	0	2	1	0		
RIBI IMMUNOCHEM RESEARCH, INC	1981	P	M	PUE	0	0	0	5	5	3	2	6
T-CELL SCIENCES	1983	P	M	PUE								6
TRITON BIOSCIENCES, INC.	1983	P	LU	SUE					3	3	5	15
UNIGENE LABORATORIES, INC.	1980	P	M	PRI	0	0	0	0	0	0	2	15
ZYMOGENETICS, INC.	1981	P	M	PRI						0	2	70
IMMUNOMED	1979	Q	S	PRI						1	1	1
ADVANCED MINERAL TECHNOLOGIES	1982	R	S	PRI	0	0	0	0	0	0	1	2
BERKELEY ANTIBODY	1983	S	S	PRI	0	0	0	0	0	1	1	2
BETHYL LABS INC.	1977	S	S	PRI	0	0	0	0	0	0	0	0
BIOPOLYMERS, INC.	1984	S	S	PRI						1	1	3
BIOSPHERICS	1967	S	L	PUE	2	1	1	1	1			5
COLLAGEN CORPORATION	1975	S	L	PUE	1	0	0	6	3	5	5	25
CYGNUS RESEARCH CORP.	1985	S	S	PRI								3
E-Y LABORATORIES, INC	1978	S	S	PRI								
GLEN MILLS, INC.	1980	S	S	PRI	0	0	0	0	0	0	0	0
INFERGENE COMPANY	1983	S	M	PUE							1	1
INTELLI-GENETICS	1980	S	M	PRI	0	0	0	0	0	0	0	0
INTER-CELL TECHNOLOGIES, INC.	1982	S	S	PRI		0	0	0	0	0	0	0
RICERCA, INC	1986	S	LU	SUE								
MARICULTURA, INC.	1986	T	S	PRI								
NEUSHUL MARICULTURE	1978	T	S	PRI							2	1
R & A PLANT/SOIL INC.	1978	T	S	PRI							2	2
AMTRON	1981	V	S	PRI			1			4	25	35
BIOLOGICS CORP	1966	V	MU	SUE								0
BIOMATRIX, INC.	1981	W	M	PRI	2			1	1	3	3	
MELOY LABORATORIES, INC.	1970	W	LU	SUE	2	1	1	1	0	0		11
TRANSFORMATION RESEARCH INC.	1981	X	S	PRI								

**REPORT ON THE BIOTECHNOLOGY INDUSTRY IN THE
UNITED STATES**

**Appendix: Joint Actions of U.S. and Foreign Corporations
With U.S. Biotechnology Companies**

**PREPARED FOR THE U.S. CONGRESSIONAL
OFFICE OF TECHNOLOGY ASSESSMENT**

**BY
THE BUSINESS STUDIES PROGRAM
NORTH CAROLINA BIOTECHNOLOGY CENTER**

**FINAL REPORT
AUGUST 1, 1987**

**CONTRACT NUMBER H3-2025.0
COST CODE 2311**

INTRODUCTION AND METHODS:

The following data and appendices were compiled for an addendum to the main contracted study for the U.S. Congressional Office of Technology Assessment as part of the study on U.S. investment in biotechnology. This addendum focuses on the joint actions taken between U.S. biotechnology companies and other corporations, both U.S. and foreign. These data are not only reflective of the growth of the small companies, but also indicate corporate involvement in biotechnology. Also indicated are the increasing foreign investment in biotechnology and the growth of biotechnology in specific product areas.

A more complete description of the Biotechnology Information Program at the North Carolina Biotechnology Center and the staff involved is contained in the original report to the OTA dated May 1, 1987. The main tool used in compiling these data is a computer-based database, originally developed in conjunction with the Wharton School of Business at the University of Pennsylvania and redeveloped and expanded in the Biotechnology Information Program at the North Carolina Biotechnology Center. This "Actions" database contains more than 1300 records describing internal and external actions taken by and involving biotechnology companies worldwide. External actions, included in this report, are actions generally involving two companies. They consist of research contracts, licensing agreements, marketing agreements, joint ventures (both specified and non-specified joint actions), equity purchases, and acquisitions.

Each record in the "Actions" database describes a piece of public information about the involved company or companies. The record includes company name(s), size of the companies, country of origin, product involved, technology involved, industry involved, type of internal or external action, a short description of the action, and the source of the information. The records came from a variety of sources in the public literature. These sources included (in approximate descending order of frequency) McGraw-Hill's Biotechnology Newswatch, Genetic Engineering News, Bio/Technology, Bioengineering News, Genetic Technology News, European Biotechnology News, The Wall Street Journal, SCRIP Pharmaceutical World News, and Chemical and Engineering News. Also used to a smaller degree were Chemical Marketing Reporter, Science, Nature, The New York Times, and Business Week. Our scanning of the literature was backed up by scanning of Abstracts in BioCommerce and searches of Dialog information services. In order to assure completeness of the present study, all missing back

issues of McGraw-Hill's Biotechnology Newswatch were purchased and the complete set from 1981 through 1986 were scanned for completeness of the database. This journal was chosen as it appears to be the most complete listing of actions taken by biotechnology.

For the purpose of this study, the important fields of information were companies involved, country of origin, type of external action, industry class involved, and product involved. Industries were coded A through Y and a code key is included in the data tables. External actions were coded as follows:

A=Acquisition
E=Equity Purchase
J=Joint Venture
L=Licensing Agreement
M=Marketing Agreement
R=Research Contract

Most records specified the type of joint action. In some instances, the exact nature of the joint agreement was not clear, and these were included in the joint ventures category.

Reports of the data were generated to prepare the seven tables and one figure included in this document. These reports are included in the appendices that follow the tables. Please note that the numbers in the tables were not a simple counting of the generated listings of data. Each listing was manually searched for double entries, non-valid entries, records that spanned more than one data category, and mismarked entries. A small percent of the records fell in these categories and the numbers were adjusted accordingly in preparing the data tables. A description of the seven data tables follows this section. Also, since some information in a few records was not available (such as industry class) the numbers of records for a similar category may vary slightly from table to table, but this variation is only one to three percent.

The accompanying data represent, we feel, an accurate depiction of the evolution and current state of the biotechnology industry. Despite the exhaustive scanning of the literature, it is likely that some actions are not represented in the database, most likely due to the proprietary nature of the information. However, in the interest of defining industry changes and trends, we feel that this report is accurately representative.

The Data Tables: Description and Comments

Table I. Joint actions between U.S. biotechnology companies and other companies. These data included all types of joint actions made by U.S. biotechnology companies and 1. U.S. Corporations, 2. Foreign Corporations, and 3. Other U.S. Biotechnology Companies. A total of 552 actions are represented. Note that the U.S. biotechnology companies have more than two-thirds as many joint actions with foreign corporations as with U.S. corporations. Also, whereas the numbers of actions with foreign corporations has leveled off early in the decade, the number of actions with U.S. corporations is on the rise.

Figure I. Joint actions between U.S. biotechnology companies and U.S. and foreign corporations between 1981 and 1986. See Table I for the data source.

Table II. Joint agreements between U.S. Biotechnology Companies and U.S. Corporations. Actions in the five listed categories are separated by year. Note that the numbers in parentheses represent the number of biotechnology companies involved in the category. for each year, and the 255 records are indicative of fewer company/years. Although there is a general trend of increase in number of joint actions per year, no one type of action showed a striking trend to increase.

Table III. Joint agreements between U.S. biotechnology companies and foreign corporations. Data are as in Table II, except that actions with foreign corporations are used. As indicated in Table I, there has not been a steady increase of these actions with foreign corporations between 1982 and 1985. As with U.S. corporations, there is no clear trend in increasing any one type of joint action over time.

Table IV. Joint agreements between U.S. biotechnology companies and U.S. corporations. The data were broken down by industry code. Note that a few records had two primary codes and were included in both code categories, but this happened in less than 5 percent of the records. The most frequent categories of joint actions were in therapeutics, followed closely by human diagnostics. Together, these two categories accounted for more than half of the included records. The total number of records in each category and the percent of total for each category are also given in this table.

Table V. Joint actions between U.S. biotechnology companies and U.S. corporations, sorted by year. A total of 241 actions are represented. There is an increase in number of total actions each year, but only the therapeutics category reflects that increase.

Table VI. Joint actions between U.S. biotechnology companies and foreign corporations. Data are similar to those in Table IV, except that foreign corporations are represented. There is a higher percentage of actions related to therapeutics in this table than those with U.S. corporations; fewer are related to human diagnostics.

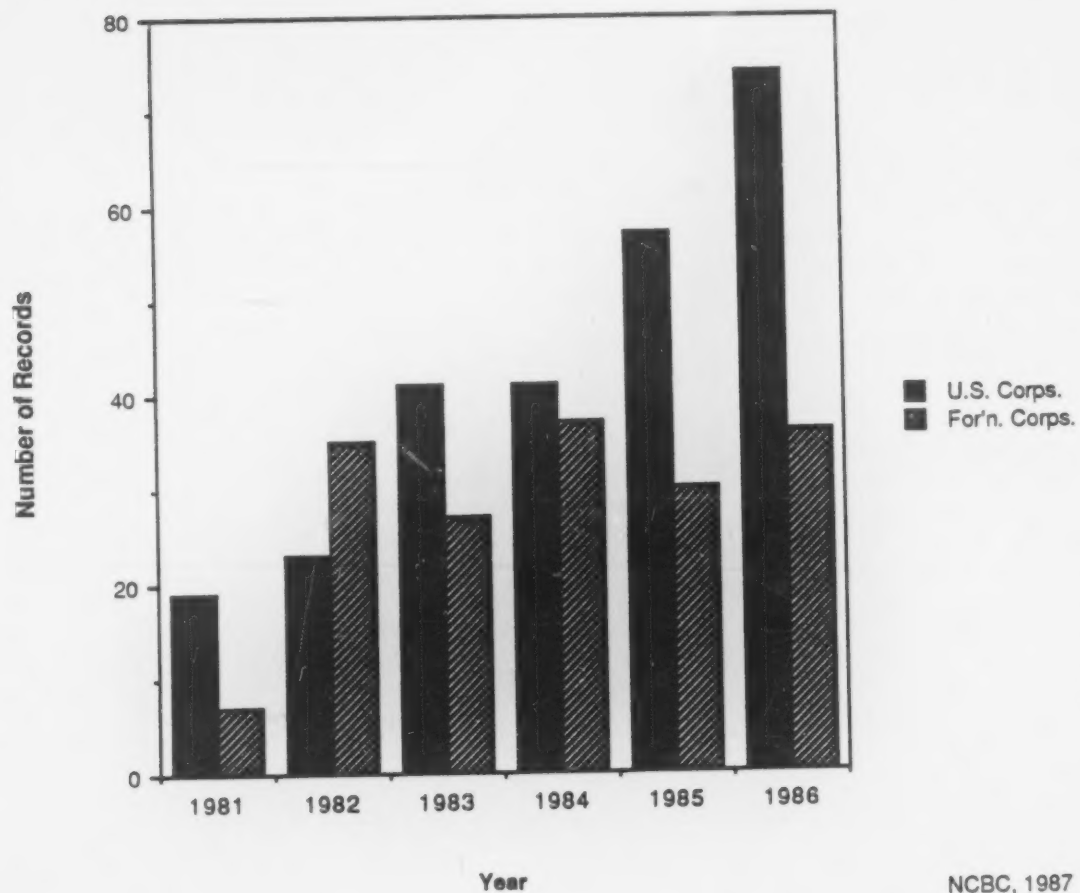
Table VII. Joint actions between U.S. biotechnology companies and foreign corporations. These data are similar to those in Table V, except that foreign corporations are represented. Unlike the data with U.S. corporations, there is no trend of increased actions with foreign corporations.

TABLE I. -- JOINT ACTIONS BETWEEN U.S. BIOTECHNOLOGY COMPANIES
AND OTHER COMPANIES, 1981-1986

PARTNER	1981	1982	1983	1984	1985	1986	TOTALS
U.S. CORPORATIONS	19	23	41	41	57	74	255
FOREIGN CORPORATIONS	7	35	27	37	30	36	172
OTHER U.S. BIOTECHNOLOGY COMPANIES	0	12	21	25	24	43	125
TOTALS	26	70	89	103	111	153	552

JOINT ACTIONS BETWEEN U.S. BIOTECHNOLOGY COMPANIES AND THE INDICATED PARTNERS. ACTIONS INCLUDE EQUITY PURCHASE, ACQUISITIONS, LICENSING AGREEMENTS, MARKETING AGREEMENTS, OR RESEARCH CONTRACTS.
SOURCE: NCBC "ACTIONS" DATABASE

Fig. 1: Joint Actions With U.S. Biotechnology Companies



NCBC, 1987

TABLE II -- JOINT ACTIONS BETWEEN U.S. BIOTECHNOLOGY COMPANIES AND
U.S. CORPORATIONS: BY TYPE OF ACTION

TYPE	1981	1982	1983	1984	1985	1986	TOTALS
JOINT VENTURE*	5(3)	6(3)	27(17)	14(10)	29(21)	23(19)	104 (73)
EQUITY PURCHASE	8(7)	7	3	8	9	13(12)	48 (46)
LICENSING AGREEMENT	4	4	4	6	8(7)	4	30 (29)
MARKETING AGREEMENT	4	0	2	5	8	13(12)	32 (31)
RESEARCH CONTRACT	1	6(5)	7(6)	6	6	15(14)	41 (38)
TOTALS	22(19)	23(19)	43(32)	39(35)	60(51)	68(61)	255(217)

NUMBER OF JOINT ACTIONS BETWEEN U.S. BIOTECHNOLOGY COMPANIES
AND U.S. CORPORATIONS, SORTED BY YEAR -- 1981-1986.
THE NUMBERS IN PARENTHESES INDICATES THE NUMBER OF DIFFERENT BIOTECHNOLOGY COMPANIES;
SOME COMPANIES HAD MORE THAN ONE JOINT AGREEMENT IN ONE YEAR. WHERE THERE ARE NO
PARENTHESES, THE NUMBER OF COMPANIES EQUATED THE NUMBER OF RECORDS.

SOURCE: NCBC "ACTIONS" DATABASE
*=JOINT VENTURES INCLUDE SPECIFIED JOINT VENTURES AND OTHER UNSPECIFIED JOINT ACTIONS

TABLE III -- JOINT ACTIONS BETWEEN U.S. BIOTECHNOLOGY COMPANIES AND
FOREIGN CORPORATIONS, BY TYPE OF ACTION

TYPE	1981	1982	1983	1984	1985	1986	TOTALS
JOINT VENTURE*	3	22 (10)	8 (7)	17 (15)	11 (10)	16 (13)	77 (58)
EQUITY PURCHASE	1	6 (5)	1	2	2	4	16 (15)
LICENSING AGREEMENT	1	2	5	5	5	1	19
MARKETING AGREEMENT	1	6	4	4	5	7	27
RESEARCH CONTRACT	2	3	1	3	5	4	18
TOTALS	8	39 (26)	19 (18)	31 (29)	28 (27)	32 (29)	157 (137)

NUMBER OF JOINT ACTIONS BETWEEN U.S. BIOTECHNOLOGY COMPANIES
AND FOREIGN CORPORATIONS, SORTED BY YEAR -- 1981-1986.
THE NUMBERS IN PARENTHESES INDICATES THE NUMBER OF DIFFERENT BIOTECHNOLOGY COMPANIES
INVOLVED, WHERE DIFFERENT FROM THE NUMBER OF RECORDS REPRESENTED IN ONE YEAR.

SOURCE: NCBC "ACTIONS" DATABASE

*=JOINT VENTURES INCLUDE SPECIFIED JOINT VENTURES AND OTHER UNSPECIFIED JOINT ACTIONS

TABLE IV --- JOINT ACTIONS BETWEEN U.S. BIOTECHNOLOGY COMPANIES AND U.S. CORPORATIONS

CODE	CLASSIFICATION	JOINT VENTURE	LICENSING	MARKETING	RES. CONTRACT	TOTALS	PERCENT
A	AGRICULTURE, ANIMAL	4	2	1	1	8	3.24
B	AGRICULTURE, PLANT	10	-	1	6	17	6.88
C	BIOMASS CONVERSION	-	-	-	-	0	0.00
D	BIOSENSORS/BIOELECTRONICS	-	-	-	-	0	0.00
E	BIOSEPARATIONS	1	-	-	-	1	0.40
F	BIOTECHNOLOGY EQUIPMENT	3	1	1	-	5	2.02
G	BIOTECHNOLOGY REAGENTS	3	-	2	1	6	2.43
H	CELL CULTURE, GENERAL	2	1	-	-	3	1.21
I	CHEMICALS, COMMODITY	-	-	-	1	1	0.40
J	CHEMICALS, SPECIALTY	7	-	1	3	10	4.05
K	DIAGNOSTICS-CLINICAL HUMAN	29	12	8	13	62	25.10
L	ENERGY	-	-	1	-	1	0.40
M	FOOD PRODUCTION/PROCESSING	8	-	-	7	15	6.07
N	MINING	-	-	-	-	0	0.00
O	PRODUCTION/FERMENTATION	3	-	1	-	4	1.62
P	THERAPEUTICS	39	12	11	10	72	29.15
Q	VACCINES	4	2	4	1	11	4.45
R	WASTE DISPOSAL/TREATMENT	-	-	-	-	0	0.00
S	OTHER-NONCLASSIFIED	5	1	-	2	8	3.24
T	MARINE BIOTECHNOLOGY	-	-	-	-	0	0.00
U	CONSULTING	-	-	-	-	0	0.00
V	VETERINARY	10	2	4	1	17	6.88
W	RESEARCH	2	-	-	1	3	1.21
X	IMMUNOLOGICAL PRODUCTS	2	-	-	-	2	0.81
Y	TOXIN TESTING	-	-	1	-	1	0.40
TOTALS		132	33	36	47	247	100.00

DATA ARE FROM NCBC "ACTIONS" DATABASE FOR 1981-1986.
JOINT VENTURES ARE OFTEN NON-SPECIFIED CONTRACTUAL ACTIVITIES BETWEEN THE 2 COMPANIES.

TABLE V. JOINT ACTIONS BETWEEN U.S. BIOTECHNOLOGY COMPANIES AND U.S. CORPORATIONS
SORTED BY YEAR

CODE	CLASSIFICATION	1981	1982	1983	1984	1985	1986
A	AGRICULTURE, ANIMAL	-	1	4	-	-	1
B	AGRICULTURE, PLANT	-	1	4	3	6	4
C	BIOMASS CONVERSION	-	-	-	-	-	-
D	BIOSENSORS/BIOELECTRONICS	-	-	-	-	-	-
E	BIOSEPARATIONS	-	-	-	-	-	1
F	BIOTECHNOLOGY EQUIPMENT	-	-	1	-	-	5
G	BIOTECHNOLOGY REAGENTS	1	-	3	1	1	1
H	CELL CULTURE, GENERAL	1	-	-	2	-	-
I	CHEMICALS, COMMODITY	-	-	-	-	-	1
J	CHEMICALS, SPECIALTY	-	1	2	5	-	2
K	DIAGNOSTICS-CLINICAL HUMAN	2	6	9	10	17	13
L	ENERGY	-	-	1	-	-	-
M	FOOD PRODUCTION/PROCESSING	1	2	1	2	4	7
N	MINING	-	-	-	-	-	-
O	PRODUCTION/FERMENTATION	-	-	-	1	1	2
P	THERAPEUTICS	6	3	8	7	16	28
Q	VACCINES	2	1	1	-	6	1
R	WASTE DISPOSAL/TREATMENT	-	-	-	-	-	-
S	OTHER-NONCLASSIFIED	-	3	2	1	2	1
T	MARINE BIOTECHNOLOGY	-	-	-	-	-	-
U	CONSULTING	-	-	-	-	-	-
V	VETERINARY	1	1	1	2	6	5
W	RESEARCH	1	-	-	-	-	2
X	IMMUNOLOGICAL PRODUCTS	-	-	2	-	-	-
Y	TOXIN TESTING	-	-	-	-	-	1
TOTAL PER YEAR		15	19	39	34	59	75
							241

JOINT ACTIONS BETWEEN U.S. BIOTECHNOLOGY COMPANIES AND U.S. CORPORATIONS -- 1981-1986.
ALL JOINT ACTIONS (JOINT VENTURES, MARKETING AGREEMENTS, LICENSING AGREEMENTS, AND
RESEARCH CONTRACTS) ARE REPRESENTED. EQUITY PURCHASES AND ACQUISITIONS ARE NOT INCLUDED.
SOURCE: NCBC "ACTIONS" DATABASE

TABLE VI --- JOINT ACTIONS BETWEEN U.S. BIOTECHNOLOGY COMPANIES AND FOREIGN CORPORATIONS

CODE	CLASSIFICATION	JOINT VENTURE	LICENSING	MARKETING	RES. CONTRACT	TOTAL	PERCENT
A	AGRICULTURE, ANIMAL	2	-	-	-	2	1.22
B	AGRICULTURE, PLANT	9	-	-	4	13	7.93
C	BIOMASS CONVERSION	-	-	-	-	0	0.00
D	BIOSENSORS/BIOELECTRONICS	-	-	-	-	0	0.00
E	BIOSEPARATIONS	1	-	-	1	2	1.22
F	BIOTECHNOLOGY EQUIPMENT	-	-	2	-	2	1.22
G	BIOTECHNOLOGY REAGENTS	4	1	2	1	8	4.88
H	CELL CULTURE, GENERAL	1	1	2	-	4	2.44
I	CHEMICALS, COMMODITY	-	-	-	-	0	0.00
J	CHEMICALS, SPECIALTY	5	-	2	-	7	4.27
K	DIAGNOSTICS-CLINICAL HUMAN	9	4	7	2	22	13.41
L	ENERGY	-	-	-	-	0	0.00
M	FOOD PRODUCTION/PROCESSING	1	1	1	1	4	2.44
N	MINING	-	-	-	-	0	0.00
O	PRODUCTION/FERMENTATION	1	1	2	1	5	3.05
P	THERAPEUTICS	40	7	12	9	68	41.46
Q	VACCINES	4	1	2	-	7	4.27
R	WASTE DISPOSAL/TREATMENT	-	-	-	-	0	0.00
S	OTHER-NONCLASSIFIED	4	1	2	-	7	4.27
T	MARINE BIOTECHNOLOGY	-	-	-	-	0	0.00
U	CONSULTING	-	-	-	-	0	0.00
V	VETERINARY	1	1	2	-	4	2.44
W	RESEARCH	2	1	-	2	5	3.05
X	IMMUNOLOGICAL PRODUCTS	2	1	1	-	4	2.44
Y	TOXIN TESTING	-	-	-	-	0	0.00
TOTALS		86	20	37	21	164	100.00

DATA ARE FROM NCBC "ACTIONS" DATABASE FOR 1981-1986.

TABLE VII. JOINT ACTIONS BETWEEN U.S. BIOTECHNOLOGY COMPANIES AND
FOREIGN CORPORATIONS, SORTED BY YEAR

CODE	CLASSIFICATION	1981	1982	1983	1984	1985	1986
A	AGRICULTURE, ANIMAL	-	-	1	-	-	-
B	AGRICULTURE, PLANT	1	2	-	4	3	3
C	BIOMASS CONVERSION	-	-	-	-	-	-
D	BIOSENSORS/BIOELECTRONICS	-	-	-	-	-	-
E	BIOSEPARATIONS	-	1	-	1	-	-
F	BIOTECHNOLOGY EQUIPMENT	-	-	-	1	1	1
G	BIOTECHNOLOGY REAGENTS	-	1	-	3	3	1
H	CELL CULTURE, GENERAL	-	2	-	1	-	-
I	CHEMICALS, COMMODITY	-	-	-	-	-	-
J	CHEMICALS, SPECIALTY	1	-	1	1	1	2
K	DIAGNOSTICS-CLINICAL HUMAN	1	5	1	4	2	5
L	ENERGY	-	-	-	-	-	-
M	FOOD PRODUCTION/PROCESSING	-	1	2	-	-	1
N	MINING	-	-	-	-	-	-
O	PRODUCTION/FERMENTATION	1	-	-	1	1	-
P	THERAPEUTICS	2	20	9	13	11	9
Q	VACCINES	1	-	-	1	1	3
R	WASTE DISPOSAL/TREATMENT	-	-	-	-	-	-
S	OTHER-NONCLASSIFIED	-	1	3	1	-	2
T	MARINE BIOTECHNOLOGY	-	-	-	-	-	-
U	CONSULTING	-	-	-	-	-	-
V	VETERINARY	-	-	-	-	2	2
W	RESEARCH	-	-	-	-	4	-
X	IMMUNOLOGICAL PRODUCTS	1	-	-	1	2	-
Y	TOXIN TESTING	-	-	-	-	-	-
TOTAL PER YEAR		8	33	17	32	31	29
							150
							ALL ACTIONS

JOINT ACTIONS BETWEEN U.S. BIOTECHNOLOGY COMPANIES AND FOREIGN CORPORATIONS - 1981-1986.
ALL JOINT ACTIONS (JOINT VENTURES, MARKETING AGREEMENTS, LICENSING AGREEMENTS,
AND RESEARCH CONTRACTS) ARE REPRESENTED. SOURCE: NCBC "ACTIONS" DATABASE

Appendices.

The data that were the basis of the preceding tables are included in the appendices that follow. They are marked according to table number. Also included, at the end, are two appendices with 1. foreign actions, sorted by country of origin, to give an indication of which countries are represented and in what frequency, and 2. records of U.S. joint actions sorted by large corporations to give an indication of which large U.S. corporations have been gaining involvement with biotechnology.

DATA FOR TABLE I
NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
JOINT AGREEMENTS
U.S. CORPORATIONS AND U.S. BT COMPANIES
SORTED BY YEAR
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YEAR	CLASS	COMPANY 1	COUNTRY	COMPANY 2	COUNTRY	ACTION	PRODUCT
1	81	O BENTLY LABS	US	AMERICAN HOSPITAL SU	US	A	
2		Q BIOGEN	US	MERCK	US	J	VACCINE
3		S BIOGEN	US	MONSANTO	US	E	
4		P BIOGEN	US	SCHERING-PLOUGH	US	JE	INTERFERON
5		VQ CETUS	US	SMITHKLINE	US	M	LIVSTOK VACCINE
6		HW COLLABORATIVE GENETI	US	DOW CHEMICAL	US	J	RDNA TECHNOL
7		P COLLABORATIVE RESEAR	US	DOW CHEMICAL	US	E	INTERFERON
8		K COLLABORATIVE RESEAR	US	STERLING DRUG	US	LM	DIAGNOSTIC TEST
9		P COLLABORATIVE RESEAR	US	WARNER-LAMBERT	US	J	UROKINASE
10		S COLLAGEN	US	MONSANTO	US	E	COLLAGEN PRODS.
11		P COLLAGEN	US	SCHERING-PLOUGH	US	M	INPLANTS
12		M DNA PLANT TECHNOLOGY	US	CAMPBELL SOUP CO	US	ER	TOMATOES
13		P GENENTECH	US	ELI LILLY	US	LM	INSULIN
14		GENENTECH	US	MONSANTO	US	E	
15		K GENETIC SYSTEMS	US	SYNTEX	US	J	DIAGNOSTIC
16		GENEX	US	MONSANTO	US	E	
17		INTERFERON SCIENCES	US	BRISTOL-MYERS	US	L	IF
18		S MOLECULAR GENETICS	US	LEDERLE	US	E	
19		G NEW ENGLAND NUCLEAR	US	DUPONT	US	A	REAGENTS
20		P VIRATEK	US	WARNER-LAMBERT	US	L	ANTICANCER
21	82	K ACUGENICS	US	COOPER BIOMEDICAL	US	A	DIAGNOSTICS
22		B AGRIGENETICS	US	KELLOGG COMPANY	US	E	SEEDS
23		K BIO-SCIENCES ENTERPR	US	AMERICAN HOSPITAL SU	US	A	DIAG. TEST KITS
24		S CETUS	US	AMOCO	US	ER	JOJOBA OIL
25		M CETUS	US	STANDARD OIL OF CALI	US	R	FRUCTOSE
26		K CHIRON	US	MERCK	US	J	HEPATITIS TEST
27		J COLLABORATIVE RESEAR	US	DOW CHEMICAL	US	R	ENZYME RENNIN
28		K COLLABORATIVE RESEAR	US	STERLING DRUG	US	L	ASSAY SYSTEM
29		GS ENZO	US	JOHNSON & JOHNSON	US	E	
30		S GENENTECH	US	CORNING	US	J	ENZYMES
31		QV GENENTECH	US	INT'L MINERAL AND CH	US	JL	ANIMAL VACCINE
32		A GENENTECH	US	MONSANTO	US	J	BOVINE GRTH HOR
33		PK GENETIC SYSTEMS	US	CUTTER	US	J	PSEUDOMONAS DRG
34		KP GENETIC SYSTEMS	US	SYVA	US	J	MONOCLONALS
35		P GENETICS INSTITUTE	US	BAXTER TRAVENOL	US	L	FACTOR VIII
36		P GENETICS INSTITUTE	US	BAXTER TRAVENOL	US	E	FACTOR VIII
37		P GENEX	US	BRISTOL-MYERS	US	RC	INTERFERONS
38		MB INT'L PLANT RESEARCH	US	ELI LILLY	US	R	CEREAL PLANTS
39		P KEY PHARMACEUTICAL	US	SYNTEX	US	E	DRUG DELIV.
40		K MOLECULAR GENETICS	US	LEDERLE	US	L	HERPES TEST
41		S MOLECULAR GENETICS	US	MARTIN MARIETTA	US	E	
42		K MONOCLONAL ANTIBODIE	US	JOHNSON & JOHNSON	US	RC	PREGNANCY TEST
43		B NPI	US	MARTIN MARIETTA	US	E	PLANTS
44	83	K AMGEN	US	ABBOTT	US	J	DNA PROBES
45		V AMGEN	US	UPJOHN	US	J	BOVINE GH
46		F AMICON	US	W R GRACE	US	A	FILTRATION
47		A BIO-TECHNOLOGY GENER	US	AMERICAN CYANAMID	US	LM	ANIMAL GRTH HOR
48		A BIOGEN	US	INTERNAT MINERALS AN	US	JL	ANIMAL GRTH HOR

NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
JOINT AGREEMENTS
U.S. CORPORATIONS AND U.S. BT COMPANIES
SORTED BY YEAR
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YEAR	CLASS	COMPANY 1	COUNTRY	COMPANY 2	COUNTRY	ACTION	PRODUCT
49	83	P BIOGEN	US	MONSANTO	US	J	TPA
50		S BIOTECHNICA INTERNAT	US	MONSANTO	US	JL	EXPRESSION SYS
51		XK CENTOCOR	US	FMC	US	J	DIAGNOSTICS
52		X CENTOCOR	US	FMC	US	J	IMMUNOREGULATOR
53		K CENTOCOR	US	WARNER-LAMBERT	US	J	DIAGNOSTIC
54		P CETUS	US	SHELL	US	J	BETA INTERFERON
55		B CHIRON	US	MARTIN MARIETTA	US	J	PLANT STRAINS
56		P CYTOGEN	US	LEDERLE	US	E	CANCER DRUGS
57		K GENENTECH	US	BAXTER TRAVENOL	US	J	DIAGNOSTICS
58		F GENENTECH	US	HEWLETT-PACKARD	US	J	INSTRUMENTS
59		K GENETIC SYSTEMS	US	SYNTEX	US	J	DIAGNOSTICS
60		K GENETICS INSTITUTE	US	ALLIED	US	R	DISEASE TEST
61		P GENETICS INSTITUTE	US	BAXTER TRAVENOL	US	J	FACTOR VIII
62		P GENETICS INSTITUTE	US	BAXTER TRAVENOL	US	J	HSA
63		JG GENEX	US	BENDIX	US	RC	ENZYMES
64		GENEX	US	HEUBLEIN	US		
65		P HYBRITECH	US	AMERICAN CYANAMID	US	J	MABS
66		K HYBRITECH	US	BAKER INSTRUMENTS	US	J	MAB BASED TESTS
67		P HYBRITECH	US	BAXTER TRAVENOL	US	J	MABS
68		P HYBRITECH	US	LEDERLE	US	J	MAB THERAP.
69		JG IGI BIOTECHNOLOGY	US	OWENS-ILLINOIS	US	J	
70		K IMMULOK	US	JOHNSON & JOHNSON	US	A	DIAGNOSTICS
71		P IMMUNEX	US	DIAMOND SHAMROCK	US	L	LYMPHOKINES
72		S IMMUNOMODULATORS	US	VENTREX	US	E	
73		INT'L PLANT RESEARCH	US	BIO-RAD LABORATORIES	US	E	
74		B INT'L PLANT RESEARCH	US	BIO-RAD LABORATORIES	US	R	
75		BS INT'L PLANT RESEARCH	US	ELI LILLY	US	J	
76		M INT'L PLANT RESEARCH	US	GENERAL FOODS	US	R	FOOD PROCESSING
77		P INTERFERON SCIENCES	US	ANNHEUSER-BUSCH	US	R	
78		A MOLECULAR GENETICS	US	AMERICAN CYANAMID	US	J	BOVINE GH
79		L PETROFERM	US	PFIZER	US	M	OIL EMULSIFIER
80		B REPLIGEN	US	FMC	US	J	PESTICIDES
81		A REPLIGEN	US	PFIZER	US	J	ANIMAL GRTH HOR
82		KP SUMMA MEDICAL	US	GENERAL ELECTRIC	US	J	MABS
83		K SYNBIOTICS	US	MILES LABS	US	JR	DIAGNOSTICS
84		Q UNIVERSITY PATENTS	US	AMERICAN CYANAMID	US	R	HERPES VACCINE
85		K WORTHINGTON DIAGNOST	US	COOPER	US	A	DIAGNOSTICS
86		G XENOGEN	US	JOHNSON & JOHNSON	US	J	
87	84	AGRIGENETICS	US	LUBRIZOL	US	A	
88		K AMERICAN BIONUCLEAR	US	SYNTEX	US	E	
89		JO AMGEN	US	TEXACO	US	R	CHEMICALS
90		SF APPLIED BIOSYSTEMS	US	BECTON DICKINSON	US	E	INSTS & CHEMS.
91		G ATLANTIC ANTIBODIES	US	CHARLES RIVER LABS	US	A	AB'S
92		P BIO-RESPONSE	US	ELI LILLY	US	RC	
93		P BIOGEN	US	SMITHKLINE	US	J	ANTI CLOT AGENT
94		K BIOTECH RESEARCH LAB	US	DUPONT	US	E	AIDS TEST
95		K BIOTECH RESEARCH LAB	US	DUPONT	US	L	DIAGNOSTICS
96		BIOTECHNICA INTERNAT	US	GULF APPLIED TECHNOL	US	E	

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YEAR	CLASS	COMPANY 1	COUNTRY	COMPANY 2	COUNTRY	ACTION	PRODUCT
97	84	J BIOTECHNICA INTERNAT	US	HJ HEINZ	US	J	PHENYLALANINE
98	M	BIOTECHNICA INTERNAT	US	HJ HEINZ	US	R	FOOD PROCESSING
99	J	BIOTECHNICA INTERNAT	US	UPJOHN	US	J	PROTEINS
100	BM	CALGENE	US	CAMPBELL SOUP CO	US	R	TOMATOES
101	K	CENTOCOR	US	ABBOTT	US	M	CANCER DIAG KIT
102	M	CETUS	US	NABISCO	US	J	FOOD PRODUCTS
103	B	CETUS	US	W R GRACE	US	J	AG PRODS
104	K	COLLABORATIVE RESEAR	US	AMERICAN HOSPITAL SU	US	J	DNA PROBE TESTS
105	P	COLLAGEN	US	MONSANTO	US	J	GROWTH FACTORS
106	P	CYTOGEN	US	AMERICAN CYANAMID	US	J	MAB THERAPEUTIC
107	K	CYTOGEN	US	BECTON DICKINSON	US	J	DIAGNOSTICS
108	K	DIAGNOSTIC INC.	US	RORER	US	EL	HYALURINIC AC
109	B	DNA PLANT TECHNOLOGY	US	KOPPERS	US	J	PLANT DIAGNOS
110	K	ENZO	US	ORTHO DIAGNOSTICS	US	JM	DIAGNOSTICS
111	M	GENENCOR	US	A.E.STALEY MFG CO.	US	E	FOOD ENZYMES
112	P	GENENTECH	US	CUTTER LABS	US	LM	FACTOR VIII
113	S	GENEX	US	ALLIED	US	J	PHENYLALANINE
114	JG	GENEX	US	SEARLE	US	J	PHENYLALANINE
115	K	IMMUNEX	US	BECTON DICKINSON	US	L	DIAGNOSTICS
116	P	IMMUNEX	US	SMITHKLINE	US	R	MAF
117	P	IMMUNEX	US	SYNTEX	US	J	IL-1
118	K	IMMUNOMEDICS	US	JOHNSON & JOHNSON	US	R	TEST KIT
119	H	INVITRON	US	MONSANTO	US	L	CULTURE PRODS
120	V	MOLECULAR GENETICS	US	UPJOHN	US	M	GENECOL 99
121	H	QUEUE SYSTEMS	US	MONSANTO	US	J	CELL CULT
122	V	RIBI IMMUNOCHEM RESE	US	AMERICAN HOME PRODUC	US	M	VET DRUG
123	M	SANOFI	US	DAIRYLAND FOOD LABOR	US	A	CHEESE
124	K	SCIENTIFIC LABORATOR	US	WARNER-LAMBERT	US	L	DIAGNOSTIC
125	K	SYNBIOTICS	US	AMERICAN HOSPITAL SU	US	J	DIAGNOSTICS
126	S	SYNERGEN	US	ELI LILLY	US	E	
127	J	SYNERGEN	US	W R GRACE	US	J	FLAVORS/FRAGRS
128	K	VIRAGEN	US	AUTOMATED MEDICAL LA	US	A	
129	B	VIRATEK	US	EASTMAN KODAK	US	E	AGRICULTURE
130	85	PQ AMGEN	US	JOHNSON & JOHNSON	US	JM	VACCINE, PEPTID
131	K	BARTELS IMMUNODIAGNO	US	AMERICAN HOSPITAL SU	US	A	DIAGNOSTICS
132	G	BIOTECHNICA INTERNAT	US	DUPONT	US	M	IN VITRO TRANS
133	B	CALGENE	US	DEKALB-PFIZER	US	J	HYB CORN SEED
134	S	CALIFORNIA BIOTECHNO	US	AMERICAN HOME PRODUC	US	ER	ANF
135	P	CALIFORNIA BIOTECHNO	US	ELI LILLY	US	L	DRUG DELIVERY
136	P	CALIFORNIA BIOTECHNO	US	ORTHO	US	JM	LHRH NASAL SPRY
137	K	CAMBRIDGE BIOSCIENCE	US	AMERICAN HOSPITAL SU	US	ML	DIAGNOSTICS
138	K	CAMBRIDGE BIOSCIENCE	US	ORTHO	US	JE	DIAGNOSTIC
139	VQ	CAMBRIDGE BIOSCIENCE	US	PHILLIPS PETROLEUM	US	L	VET VACCINE
140	K	CENTOCOR	US	DUPONT	US	J	DIAGNOSTICS
141	K	CENTOCOR	US	WARNER-LAMBERT	US	L	HEP B DIAGS
142	O	CETUS	US	NATIONAL DISTILLERS	US	J	CORN STARCH
143	P	CETUS	US	SCHERING PLOUGH	US	J	ANTIBIOTICS
144	VQ	CETUS	US	TECHAMERICA	US	J	VET VACCINE

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YEAR	CLASS	COMPANY 1	COUNTRY	COMPANY 2	COUNTRY	ACTION	PRODUCT
145	85	K	CHIRON	US COOPER	US	J	DIAGNOSTICS
146		K	CHIRON	US JOHNSON & JOHNSON	US	EJ	DIAGNOSTICS
147		P	COLLAGEN	US BRISTOL-MYERS	US	J	COLLAGEN
148		P	COLLAGEN	US ELI LILLY	US	J	CARDIOVASCULAR
149		K	CYTOGEN	US JOHNSON & JOHNSON	US	JR	MAB AND NMR DX
150		K	DAMON BIOTECH	US ELI LILLY	US	RC	DIAGNOSTICS
151		B	DNA PLANT TECHNOLOGY	US AMERICAN HOME PRODUC	US	J	CORN
152		B	DNA PLANT TECHNOLOGY	US ARTHUR D. LITTLE	US	J	PLANT CLONING S
153		M	DNA PLANT TECHNOLOGY	US GENERAL FOODS	US	J	COFFEE
154		M	DNA PLANT TECHNOLOGY	US HERSHEY	US	J	COCOA BEANS
155		M	DNA PLANT TECHNOLOGY	US KRAFT	US	J	SNACK FOODS
156		B	DNA PLANT TECHNOLOGY	US UNITED FRUIT	US	J	PLANTS
157		P	GENENTECH	US CUTTER BIOLOGICALS	US	M	CLOTTING AGENT
158		PM	GENENTECH	US LUBRIZOL	US	J	VITAMIN C
159		P	GENENTECH	US MILES LABS	US	J	FACTOR VIII
160		P	GENENTECH	US MONSANTO	US	RC	GROWTH HORMONES
161		S	GENETIC SYSTEMS	US BRISTOL-MYERS	US	A	MAB
162		K	GENETIC SYSTEMS	US MILES LABS	US	J	MABS FOR INFECT
163		K	GENETIC SYSTEMS	US SYNTEX	US	EJ	IMMUNOASSAYS
164		B	GENETICS INSTITUTE	US UNIROYAL	US	R	PESTICIDES
165		VQ	GENEX	US AH ROBBINS	US	J	CHICKEN VACCINE
166		P	GENZYME	US COOPERVISION	US	J	OPHTHALMALOGIC
167		K	HYBRITECH	US AMERICAN HOSPITAL SU	US	L	MAB-TESTS
168		PX	HYBRITECH	US BAXTER TRAVENOL	US	J	PASSIVE IMMUN.
169		K	HYBRITECH	US CURTIS MATHESON	US	M	TANDEM/ICON
170		K	HYBRITECH	US DUPONT	US	L	MAB-TESTS
171		KP	HYBRITECH	US ELI LILLY	US	A	MABS
172		P	IMMUNEX	US EASTMAN KODAK	US	J	LYMPHOKINES
173		P	INTERFERON SCIENCES	US ANNHEUSER-BUSCH	US	JL	IF
174		K	MOLECULAR BIOSYSTEMS	US DUPONT	US	L	AIDS TEST
175		K	MOLECULAR BIOSYSTEMS	US DUPONT	US	E	DNA PROBE
176		K	MOLECULAR BIOSYSTEMS	US DUPONT	US	R	DNA DIAGNOSTICS
177		QV	MOLECULAR GENETICS	US EASTMAN KODAK	US	J	VET. VACCINE
178		P	MOLECULON	US AMERICAN HOME PRODUC	US	J	TRANSDERMAL
179		V	MOLECULON	US UPJOHN	US	J	VET DRUG DELIV
180		V	MONOCLONAL ANTIBODIE	US RALSTON PURINA	US	J	VET DIAGNOSTICS
181		V	NEOGEN	US SQUIBB	US	J	VETERINARY
182		B	NPI	US MC CORMICK	US	E	PLANT MB
183			ONCOGEN	US BRISTOL-MYERS	US	E	
184		Q	PRAXIS BIOLOGICS	US MEAD JOHNSON	US	M	VACCINES
185		K	QUIDEL	US BECTON DICKINSON	US	ME	DIAGNOSTCS
186		P	REPLIGEN	US GILLETTE	US	J	HAIR PRODUCT
187		S	T CELL SCIENCES	US SYNTEX	US	E	
188		K	TECHNOGENETICS	US WARNER-LAMBERT	US	J	DIAGNOSTICS
189	86	I	ADVANCED GENETIC SCI	US DUPONT	US	R	
190		OJ	ADVANCED GENETIC SCI	US EASTMAN KODAK	US	J	SNOWMAX
191		K	AGEN USA	US AMERICAN HOSPITAL SU	US	M	BLOOD SCREEN KT
192		B	AGRACETUS	US CETUS	US		COTTON

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YEAR	CLASS	COMPANY 1	COUNTRY	COMPANY 2	COUNTRY	ACTION	PRODUCT
193	86	B	AGRI-DIAGNOSTICS ASS	US	O.M. SCOTT & SONS	US	M PLANT DIAGNOSTI
194		JO	AMGEN	US	EASTMAN KODAK	US	JM CHEMICALS
195		P	AMGEN	US	JOHNSON & JOHNSON	US	J IL-2 ANALOG
196		P	AMGEN	US	SMITHKLINE	US	EJ SOMATOTROPIN
197		PK	APPLIED BIOTECHNOLOG	US	DUPONT	US	J CANCER DX, THERA
198		P	BIO-TECHNOLOGY GENER	US	BAXTER TRAVENOL	US	M GROWTH HORMONE
199		P	BIO-TECHNOLOGY GENER	US	BRISTOL-MYERS	US	LM SOD
200		P	BIOGEN	US	BAXTER TRAVENOL	US	L G-INTERFERON
201		P	BIOGEN	US	SCHERING-PLOUGH	US	A-INTERFERON
202		B	BIOTECHNICA INTERNAT	US	UNIROYAL	US	R RHIZOBIA BACT.
203		V	CALIFORNIA BIOTECHNO	US	AMERICAN HOME PRODUC	US	J PET VACCINES
204		P	CALIFORNIA BIOTECHNO	US	AMERICAN HOME PRODUC	US	M NAZDEL
205		P	CALIFORNIA BIOTECHNO	US	ORTHO	US	R NAZDEL
206		P	CALIFORNIA BIOTECHNO	US	WYETH	US	M RENIN INHBITORS
207		V	CAMBRIDGE BIOSCIENCE	US	SMITHKLINE	US	M FELINE LEUK KIT
208		F	CAMBRIDGE RESEARCH B	US	MILLIGEN	US	E
209		P	CENTOCOR	US	FMC	US	E
210		K	CETUS	US	EASTMAN KODAK	US	J AIDS DIAG
211		K	CETUS	US	EASTMAN KODAK	US	J DIAGNOSTICS
212		F	CETUS	US	PERKIN ELMER	US	J INSTRUMT SYSTMS
213		F	CHARLES RIVER BIOTEC	US	CORNING GLASS WORKS	US	A
214		PQ	CHIRON	US	MERCK	US	RECOMBIVAX HB
215		P	CISTRON TECHNOLOGY	US	DUPONT	US	L IL-2
216		Q	CODON	US	SMITHKLINE	US	M SWINE VACCINES
217		M	COLLABORATIVE RESEAR	US	DOW CHEMICAL	US	P RENIN
218		KP	CYTOGEN	US	EASTMAN KODAK	US	E
219		KP	CYTOGEN	US	EASTMAN KODAK	US	R
220		P	DIAGNOSTIC INC	US	COOPERVISION	US	M HYALURONIC ACID
221		B	DNA PLANT TECHNOLOGY	US	CAMPBELL SOUP COMPAN	US	DNAP-9 TOMATO
222		B	DNA PLANT TECHNOLOGY	US	DUPONT	US	J PLANT VARIETIES
223		M	DNA PLANT TECHNOLOGY	US	MONSANTO	US	J SWEETENERS
224		M	DNA PLANT TECHNOLOGY	US	NUTRASWEET CO	US	R SWEETENERS
225		B	ECOGEN	US	AMERICAN CYANAMID	US	RE INSECTICIDE
226		K	ELECTRO-NUCLEONICS	US	PRUTECH R AND D PART	US	R AIDS TEST
227		WP	ENDOTRONICS	US	CELANESE	US	R IMMUNE CELLS
228		P	ENDOTRONICS	US	CELANESE	US	E HEPATITIS B VIR
229		H	ENDOTRONICS	US	CELANESE	US	E T-CELL THERAPY
230		P	ENDOTRONICS	US	CELANESE	US	R AIDS TREATMENT
231		M	ENGENICS	US	EASTMAN KODAK	US	J BIOCHEMICALS
232		K	GEN-PROBE	US	FISHER SCIENTIFIC	US	M MYCOPLASMA KIT
233		O	GENENTECH	US	CORNING GLASS	US	J
234		F	GENENTECH	US	NEW BRUNSWICK SCIENT	US	L
235		F	GENETIC DESIGN	US	MILLIPORE	US	A DNA SYNTHESIZER
236		S	GENETICS INSTITUTE	US	INTERNATIONAL PAPER	US	J
237		P	GENEX	US	SCHERING-PLOUGH	US	R PLASMA PROTEIN
238		P	HEPAR INDUSTRIES	US	AMERICAN HOME PRODUC	US	L HEPARIN
239		K	HYBRITECH	US	ABBOTT	US	MAB SANDWICH
240		P	IMMUNEX	US	EASTMAN KODAK	US	J LYMPHOKINE PROD

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YEAR	CLASS	COMPANY 1	COUNTRY	COMPANY 2	COUNTRY	ACTION	PRODUCT
241	86	KP IMMUNOMEDICS	US	JOHNSON & JOHNSON	US	R	
242	M	INGENE	US	BEATRICE FOODS	US	R	SWEETENER
243	MK	INTEGRATED GENETICS	US	AMOCO	US	J	FOOD DIAGNOSTIC
244	F	INTELLIGENETICS	US	AMOCO	US	A	SOFTWARE
245	P	INTERFERON SCIENCES	US	ANNHEUSER-BUSCH	US	E	IF
246	P	INVITRON	US	SEARLE	US	J	
247	P	MEDI-CONTROL CORP	US	BIOTECHNOLOGY DEV CO	US	E	DRUG DELIVERY
248	P	MELOY LABORATORIES	US	RORER GROUP	US	A	
249	V	MOLECULAR GENETICS	US	EASTMAN KODAK	US	J	
250	P	MOLECULON	US	BRISTOL-MYERS	US	J	DRUG DELIV
251	K	MONOCLONAL ANTIBODIE	US	ALCON LABORATORIES	US	J	
252	K	MONOCLONAL ANTIBODIE	US	ELI LILLY	US		SANDWICH ASSAYS
253	K	MONOCLONAL ANTIBODIE	US	ORTHO	US		OVULTN PREDICTR
254	K	MONOCLONAL ANTIBODIE	US	ORTHO	US		OVUTIME TEST
255	KP	NEORX	US	EASTMAN KODAK	US	EJ	
256	P	NOVA PHARMACEUTICALS	US	CELANESE	US	E	
257	P	NOVACEL	US	CELANESE	US	J	
258	M	NUTRISEARCH CO	US	EASTMAN KODAK	US	J	FOOD INGREDIENT
259	WP	ONCOGENE SCIENCE	US	PFIZER	US	EJ	ONCOGENES, GF'S
260	E	SEPRACOR	US	AMERICAN CYANAMID	US	J	MRMBRANE TECH
261	V	SYNBIOTICS	US	INTERNATIONAL MINERA	US	J	DIAGNOSTICS
262	VA	SYNBIOTICS	US	PRUTECH R AND D PART	US	R	VACCINES, ETC.
263	P	SYNERGEN	US	PROCTER AND GAMBLE	US	J	COLLAGENASE INH
264	G	T CELL SCIENCES	US	BOEHRINGER MANNHEIM	US	M	MONO ANTIBDS
265	PK	T CELL SCIENCES	US	PFIZER	US	R	ARTHRITIS DRUG
266	P	TRITON BIOSCIENCES	US	CETUS	US	J	INTERFERON
267	F	VEGA BIOTECHNOLOGIES	US	DUPONT	US	AJ	DNA SNTHESIZERS
268	F	VEGA BIOTECHNOLOGIES	US	DUPONT	US	EM	SYNTHESIZERS
269	K	VENTREX	US	BAXTER TRAVENOL DIAG	US	R	DX REAGENTS

DATA FOR TABLE I
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YEAR	CLASS	COMPANY 1	COUNTRY	COMPANY 2	COUNTRY	ACTION	PRODUCT
1	81	Q BIOGEN	US	GREEN CROSS	JAPAN	J	VACCINE
2		P COLLABORATIVE RESEAR	US	GREEN CROSS	JAPAN	E	UROKINASE
3		JX ENZO	US	KINTO	JAPAN	J	ENZYMES
4		P GENENTECH	US	HOFFMANN-LA ROCHE	SWISS	J	INTERFERON
5		PO GENENTECH	US	TORAY INDUSTRIES	JAPAN	MR	INTERFERON
6		K HYBRITECH	US	MITSUBISHI	JAPAN	L	ANTI IGE KIT
7		B INT'L PLANT RESEARCH	US	CLAEYS-LUCK	FRANCE	R	PLANTS
8	82	B AGRIGENETICS	US	HOFFMANN-LA ROCHE	SWISS	EJ	SEEDS
9		H BIOASSAY SYSTEMS	US	TORAY INDUSTRIES	JAPAN	M	BIOASSAY
10		P BIOGEN	US	FUJISAWA	JAPAN	J	TPA
11		P BIOGEN	US	MEIJI SEIKA	JAPAN	J	ANTIBIOTIC
12		P BIOGEN	US	SHIONOGI	JAPAN	J	HSA
13		P BIOGEN	US	TEIJIN	JAPAN	JM	FACTOR VIII
14		P BIOGEN	US	YAMANOUCHI PHARMACEU	JAPAN	J	ANTI-INFLAMM.
15		K BIOMEDICAL RESEARCH	US	HOFFMANN-LA ROCHE	SWISS	A	LAB TESTS
16		G BIOTECH RESEARCH LAB	US	FUJIZOKI	JAPAN	EJ	MAB
17		P CENTOCOR	US	INTERNATIONAL CIS	FRANCE	M	MAB'S
18		P COLLABORATIVE RESEAR	US	GREEN CROSS	JAPAN	M	B-INTERFERON
19		EP DAMON BIOTECH	US	HOFFMANN-LA ROCHE	SWISS	J	PURIFICATION
20		K ENZO	US	MEIJI SEIKA	JAPAN	LM	HCG TEST
21		P GENENTECH	US	GRUENENTHAL GMBH	W GER	J	UROKINASE
22		S GENENTECH	US	MANY JAPANESE COMPAN	JAPAN	J	MANY
23		P GENENTECH	US	MITSUBISHI CHEMICAL	JAPAN	J	TPA
24		P GENENTECH	US	SPEYWOOD LABORATORIE	UK	J	FACTOR VIIIC
25		P GENENTECH	US	TAKEDA	JAPAN	O	B-INTERFERON
26		P GENEX	US	FORTIA AB	SWEDEN	R	HYALURONIC ACID
27		P GENEX	US	GREEN CROSS	JAPAN	J	HSA
28		P GENEX	US	MITSUMI TOATSU	JAPAN	J	UROKINASE
29		P GENEX	US	SCHERING AG	WGER	J	CARDIO DRUG
30		P GENEX	US	YAMANOUCHI PHARMACEU	JAPAN	J	TPA
31		K HANA BIOLOGICS	US	FUJIZOKI	JAPAN	EJ	DIAGNOSTICS
32		K HANA BIOLOGICS	US	RECORDATI	ITALY	JE	DIAGNOSTICS
33		P HYBRITECH	US	GREEN CROSS	JAPAN	J	IMMUNOGLOBULINS
34		H HYBRITECH	US	TEIJIN	JAPAN	J	MABS
35		B INT'L PLANT RESEARCH	US	SIME DARBY BERHAD	MALAYSIA	J	TROPICAL CROPS
36		P INTERFERON SCIENCES	US	GREEN CROSS	JAPAN	M	G-INTERFERON
37		P INTERFERON SCIENCES	US	GREEN CROSS	JAPAN	J	INTERFERONS
38		S MOLECULAR DIAGNOSTIC	US	BAYER	WGER	E	
39		KP MONOTECH LABS	US	EKEN	JAPAN	R	DIAGNOSTICS
40		G P-L BIOCHEMICALS	US	PHARMACIA	SWED	A	BIOCHEMICALS
41		K TECHNCLONE	US	FUJIZOKI	JAPAN	L	DIAGNOSTIC
42		PM ZYMOS	US	NOVO INDUSTRI	DENMARK	ER	YEAST PRODUCTS
43	83	P BIOGEN	US	SHAANXI PHARMACEUTIC	CHINA	J	GAMMA IF
44		P BIOGEN	US	SHIONOGI	JAPAN	L	IL-2
45		P BIOGEN	US	SUNTORY	JAPAN	J	TNF
46		K CENTOCOR	US	TORAY INDUSTRIES	JAPAN	JL	DIAGNOSTICS
47		P COLLABORATIVE RESEAR	US	GREEN CROSS	JAPAN	L	INTERFERON
48		S FLOW LABORATORIES	US	CONTACT-HOLDING	NETH	J	

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YEAR	CLASS	COMPANY 1	COUNTRY	COMPANY 2	COUNTRY	ACTION	PRODUCT
49	83	MJ GENENCOR	US	CHRIS HANSEN'S LABOR	DENMARK	M	RENNIN
50		P GENENTECH	US	DAIICHI SEIYAKU	JAPAN	L	GAMMA INTERFERN
51		P GENENTECH	US	MITSUBISHI	JAPAN	J	TPA
52		P GENEX	US	YOSHITOMI PHARM INDU	JAPAN	J	IL-2
53		M INNOVAX LABS	US	SHOW BRAND MILK	JAPAN	L	
54		P INTEGRATED GENETICS	US	TOYOBO	JAPAN	JM	TPA
55		S REPLIGEN	US	C. ITOH	JAPAN	EM	PROTEINS
56		P TECHNICLONE	US	HOFFMANN-LA ROCHE	SWISS	RC	ANTIBODY
57		S UNIVERSITY GENETICS	US	NISSHO IWAI	JAPAN	M	
58		A XENOGEN	US	MITSUMI TOATSU	JAPAN	J	FEED ADDITIVES
59		B ZOECON	US	SANDOZ	SWITZ.	A	SEEDS
60	84	K AMERICAN DIAGNOSTICS	US	HOFFMANN-LA ROCHE	SWISS	A	DIAGNOSTICS
61		P AMGEN	US	KIRIN BREWERY	JAPAN	J	ERYTHROPOIETIN
62		P ATLANTIC ANTIBODIES	US	ORIENTAL YEAST	JAPAN	M	ANTISERA
63		S BATELLE DEVELOPMENT	US	MITSUBISHI	JAPAN	J	
64		K BIO-RESPONSE	US	CIBA-GEIGY	SWISS	O	DRUGS
65		X BIOGEN	US	KABIVITRUM	SWEDEN	LM	SOMATOMEDIN C
66		Q BIOGEN	US	WELLCOME BIOTECHNOLO	UK	JM	VACCINE
67		B BIOTECHNICA INTERNAT	US	SEAGRAMS	CANADA	RE	MANY
68		B CALGENE	US	RHONE-POULENC AGROCH	FRANCE	J	SUNFLOWERS
69		P CENTOCOR	US	HOFFMANN-LA ROCHE	SWISS	M	CANCER TREATMNT
70		J CHIRON	US	GIST-BROCADES	NETH	J	SOD
71		P COLLABORATIVE RESEAR	US	SANDOZ	SWISS	L	PLASMINOGEN ACT
72		HE DAMON BIOTECH	US	HOFFMANN-LA ROCHE	SWISS	O	ENCAPCEL
73		F ENDOTRONICS	US	MITSUMI	JAPAN	M	INSTRUMENTATION
74		FO GENENTECH	US	FUJISAWA	JAPAN	LM	LYMPHOTOXIN
75		J GENETIC SYSTEMS	US	BAYER	W GER		MABS
76		P GENETICS INSTITUTE	US	CHUGAI PHARMACEUTICA	JAPAN	JM	ERYTHROPOETIN
77		P GENETICS INSTITUTE	US	SANDOZ	SWISS	J	LYMPHOKINE FACT
78		P GENEX	US	BEHRINGWERKE	WGER	J	SERUM PROTEIN
79		P GENEX	US	MONTEDISON	ITALY	J	STERIODS
80		KP HUMAN ANTIBODY TECHN	US	KYOWA HAKKO	JAPAN	J	DIAGNOSTIC
81		K HYBRITECH	US	TOYO SODA	JAPAN	JM	DIAGNOSTIC
82		P IMMUNEX	US	BEHRINGWERKE	WGER	J	CSF
83		P IMMUNEX	US	HOFFMANN-LA ROCHE	SWISS	L	INTERLEUKIN-2
84		P IMRE	US	PHARMACIA	SWED	J	PROTEIN A
85		K INTEGRATED GENETICS	US	FUJIREBO	JAPAN	J	DNA PROBE
86		K LIFE TECHNOLOGIES	US	UNILEVER	UK	O	DIAGNOSTICS
87		P LYMPHOMED	US	FUJISAWA	JAPAN	W	ANTI-PNEUMONIA
88		G MOLECULAR BIOSYSTEMS	US	FUNAKOSHI	JAPAN	M	MICROSPHERES
89		B NPI	US	SUMITOMO	JAPAN	J	FOODS
90		P PHARMACIA DEVELOPMEN	US	PHARMACIA	SWED		
91		B PLANT GENETICS	US	KIRIN BREWERY	JAPAN	JE	SEED
92		H QUEUE SYSTEMS	US	SHIN MEIWA INDUSTRY	JAPAN	ML	BT PRODUCTS
93		E UNIGENE LABORATORIES	US	HOFFMANN-LA ROCHE	SWISS	RC	GROWTH FACTOR
94		K UNIGENE LABORATORIES	US	SIGMA-TAU	ITALY	J	DIAGNOSTICS
95		G VEGA BIOTECHNOLOGIES	US	HOFFMANN-LA ROCHE	SWISS	RC	
96		G VENTREX	US	FUNAKOSHI	JAPAN	M	MAB

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YEAR	CLASS	COMPANY 1	COUNTRY	COMPANY 2	COUNTRY	ACTION	PRODUCT
97	85	P AMGEN	US	AMERSHAM INTERNATIOA	UK	M	GROWTH FACTORS
98		GF APPLIED BIOSYSTEMS	US	JAPAN SCIENTIFIC INS	JAPAN	J	REAGENTS
99		J BIO-TECHNOLOGY GENER	US	PHARMACIA	SWE	E	HYALURONIC ACID
100		P BIOGEN	US	BASF	WGER	J	TNF
101		G BIOGEN	US	CIBA-GEIGY	SWISS	L	YEAST PROMOTER
102		X BIOGEN	US	SUMITOMO	JAPAN	J	COLONY STIM FAC
103		J BIOSEARCH	US	BIOSYNTECH BIOCHEMIS	WGER	MJ	DNA PRODS
104		B CALGENE	US	KEMIRA	JAPAN	R	HERBECIDE TOLER
105		B CALGENE	US	KURARAY	JAPAN	J	AGCHEMS
106		B CALGENE	US	NESTLE	SWISS	J	HERBICIDE TOL
107		X CETUS	US	SCHERING AG	W GER	C	MABS-CA IMAGING
108		P CHIRON	US	PHARMACIA	SWEDEN	J	SOD
109		P COLLAGEN	US	LEDERLE (JAPAN)	JAPAN	L	IMPLANT
110		P CREATIVE BIOMOLECULE	US	MENARINI	ITALY	J	TPA
111		P CYTOGEN	US	FARMITALIA CARLA ARB	IT	J	CA TREATMENT
112		K DIAGNON	US	AMERSHAM INTERNATION	UK	M	DIAGNOSTIC
113		OP GENENTECH	US	BOEHRINGER INGELHEIM	WGER	EJ	TNF
114		W GENENTECH	US	BOEHRINGER INGELHEIM	WGER	J	RES. INSTITUTE
115		V GENENTECH	US	CIBA-GEIGY	SWISS	L	VETERINARY
116		P GENENTECH	US	KABIVITRUM	SWEDEN	R	HGH
117		Q GENENTECH	US	MITSUBISHI	JAPAN	L	VACCINE
118		K GENETIC DIAGNOSTICS	US	HOFFMANN-LA ROCHE	SWISS	JR	MABS
119		P GENETICS INSTITUTE	US	WELLCOME	UK	M	TPA
120		G GENEX	US	PHARMACIA	SWEDEN	J	PROTEIN A
121		W GENEX	US	WELLCOME RESEARCH LA	UK	R	GENE STUDY
122		P INTEGRATED GENETICS	US	BASF	WGER	J	TPA
123		V MOLECULAR GENETICS	US	SHIONOGI	JAPAN	M	ANIMAL DRUGS
124		HJ PURIFICATION ENGINEE	US	RHONE-POULENC AGROCH	FRANCE	A	CHEMICALS
125		W UNIGENE LABORATORIES	US	CIBA-GEIGY	SWISS	RJ	PROTEASE INHIB
126		P UNIGENE LABORATORIES	US	ERBAMONT	ITALY	J	CALCITONIN
127		W UNIGENE LABORATORIES	US	TOYO SODA	JAPAN	L	IMMUNIZATION
128	86	B AGRI-DIAGNOSTICS	US	CIBA-GEIGY	SWITZ	J	DIAG. KITS
129		P ALZA CORPORATION	US	CIBA-GEIGY	SWISS		ESTRADERM
130		P AMGEN	US	AB FERMENTA	SWEDEN	E	
131		Q BIOGEN	US	BEHRINGWERKE	W GER	M	MALARIA VACCINE
132		F BIOREACTOR TECHNOLOG	US	C. ITOH	JAPAN	M	BIOREACTOR
133		BIOSTAR MEDICAL PROD	US	SKANDIGEN AB	SWEDEN	E	
134		B BIOTECHNICA INTERNAT	US	ENICHEM AGRICOLTURA	ITALY	R	RHIZOBIA BACT.
135		P CALIFORNIA BIOTECHNO	US	HOFFMANN-LA ROCHE	SWISS	RC	
136		Q CHIRON	US	CIBA-GEIGY	SWITZ.	J	VACCINES
137		PQ CHIRON	US	CIBA-GEIGY	SWITZ	J	VACCINES
138		JG CHIRON	US	THE PETROFINA GROUP	BELGIUM	J	INDSTRIAL ENZYM
139		P COLLABORATIVE RESEAR	US	SANDOZ	SWITZ.		
140		S CYANOTECH	US	DAIKYO OIL COMPANY	JAPAN	E	
141		K DAMON BIOTECH	US	ARES-SERONO	NETHERLAND	O	DIAGNOSTIC MABS
142		P DAMON BIOTECH	US	HOFFMANN-LA ROCHE	SWISS		ALPHA INTERFERN
143		K DIAGNOSTIC PRODUCTS	US	DAINIPPON INK & CHEM	JAPAN	M	IMMUNODIAG.
144		ELECTRO-NUCLEONICS	US	PHARMACIA	SWEDEN	E	

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145	86	K	ELECTRO-NUCLEONICS	US PHARMACIA	SWEDEN	M	DIAGNOSTICS
146		P	ENDOTRONICS	US NIPPON CHEMICAL INDU	JAPAN	J	HGH
147		K	ENDOTRONICS	US SINO AMERICAN BIOTEC	CHINA	J	MAB DIAGNOSTICS
148		S	GENENTECH	US BURROUGHS WELLCOME	UK		
149		S	GENETICS INSTITUTE	US GIST-BROCADES	NETH	J	
150		P	GENEX	US BEHRINGWERKE	WGER	R	THERAPU PROTEIN
151		J	GENZYME	US NAGASE & CO.	JAPAN	J	AMYLASE
152		P	IMMUNEX	US HOFFMANN-LA ROCHE	SWISS	J	IL-2
153		M	INGENE	US MITSUBISHI	JAPAN	J	SWEETENERS
154		P	LIPOSOME TECHNOLOGY	US TAKEDA	JAPAN	R	
155		V	NEOGEN	US SOLVAY	BELGIUM	J	DIAGNOSTICS
156		K	NOVO BIOLABS USA	US NOVO INDUSTRI A/S	DENMARK	M	DIAGNOSTICS
157		B	PRUTEC	US DJ VAN DER HAVE BV	NETH.	J	SEEDS
158		K	SERONO LABS	US DIAGNOSTICS PASTEUR	FRANCE	M	TEST KITS
159		V	SYNBIOTICS	US NORDEN-EUROPE	UK	M	VETERINARY DX
160		P	SYNERGEN	US CIBA-GEIGY	SWISS	J	ELASTASE INHIB
161		S	UNIVERSITY GENETICS	US L'OREAL	FRANCE	L	TGF
162		P	VIVOTECH	US CANADIAN ASTRONAUTIC	CANADA	J	IMPLANTS
163		P	ZYMOGENETICS	US NOVO INDUSTRI A/S	DENMARK		FACTOR VII
164		P	ZYMOGENETICS	US TEIJIN LTD	JAPAN	J	BLOOD FACTORS

DATA FOR TABLE I
NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
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YEAR	CLASS	COMPANY 1	COUNTRY	COMPANY 2	COUNTRY	ACTION	PRODUCT
1	81	O CETUS	US	DAVY MCKEE	US	J	PLANT DVLPMT
2	82	P BIOGEN	US	STONE AND WEBSTER EN	US	J	
3		KP CALIFORNIA IMMUNO DI	US	TECHAMERICA	US	A	ANIMAL
4		P COLLABORATIVE RESEAR	US	INTERFERON SCIENCES	US	J	GAMMA IF
5		K COOPER	US	HYLAND DIAGNOSTICS	US	A	DIAGNOSTICS
6		B DEKALB-PFIZER GENETI	US	DEKALB AGRESEARCH	US	J	SEED HYBRIDS
7		GENETIC ENGINEERING	US	TOWER TECH LTD.	US	J	EMBRYOS
8		P IMMUNOMODULATORS	US	CETUS	US	J	GAMMA IF
9		B INT'L PLANT RESEARCH	US	INT'L GENETIC ENGINE	US	O	PLANTS
10		P INTEGRATED GENETICS	US	SERONO LABORATORIES	US	R	GONADOTROPINS
11		P INTEGRATED GENETICS	US	SERONO LABORATORIES	US	J	BLOOD FACTORS
12		P RIBI IMMUNOCHEM RESE	US	GIBCO	US	J	
13		P SQUIBB/NOVO	US	BIOGEN	US	J	INSULIN
14	83	IO BIO-ALCONETICS	US	JOJOBA HORIZONS	US	J	ALCOHOL
15		XG BIOTECH RESEARCH LAB	US	CELLULAR PRODUCTS	US	J	TCGF, BCGF
16		P CHIRON	US	NORDISK	US	J	INSULIN
17		K CREATIVE BIOMOLECULE	US	CALIFORNIA MEDICAL C	US	A	KITS
18		G CREATIVE BIOMOLECULE	US	VEGA BIOTECHNOLOGIES	US	L	OLIGONUCL.
19		G FLOW LABORATORIES	US	HANA BIOLOGICS	US	J	NA
20		V GENENTECH	US	GRANADA	US	R	IFN-ALPHA
21		K GENETIC SYSTEMS	US	APPLIED BIOSYSTEMS	US	J	DIAGNOSTICS
22		M GENEX	US	CELL PRODUCTS	US	J	L-PHENYLALANINE
23		S GENTRONIX	US	ELECTRO MOLECULAR VE	US	A	
24		K IMMULOK	US	ORTHO DIAGNOSTICS	US	O	DIAGNOSTICS
25		P IMMUNEX	US	GENZYME	US	L	LYMPHOKINES
26		GJ IMMUNEX	US	KC BIOLOGICAL	US	J	GROWTH FACTORS
27		V IMMUNEX	US	SDS BIOTECH	US	JL	VET THERAPEUT.
28		WP IMMUNO MODULATORS	US	M D ANDERSON HOSPITA	US	JR	IL-2 (TESTING)
29		P INTEGRATED GENETICS	US	SERONO LABORATORIES	US	J	HCG
30		S INTRA GENE INTERNATI	US	UNIVERSITY MICRO REF	US	J	
31		P UNIVERSITY GENETICS	US	XANADU LABORATORIES	US	J	TISSUE FACTORS
32		KG VENTREX	US	DIAGNOSTIC REAGENT T	US	AE	
33		S VENTREX	US	TEXAS BIOSCIENCE	US	AE	
34		AP XENOGEN	US	GENENTECH	US	J	IF DELIVERY SYS
35	84	H AMERICAN DIAGNOSTICS	US	GENETIC DIAGNOSTICS	US	J	MABS
36		F APPLIED BIOSYSTEMS	US	BROWNLEE LABORATORIE	US	E	
37		F APPLIED BIOSYSTEMS	US	GENETIC SYSTEMS	US	J	MAB PRODUCTION
38		PK BIO-RESEARCH	US	MUTATECH	US	J	TOXICOLOGY
39		S BTC DIAGNOSTICS	US	DENNISON MANUFACTURI	US	E	NA
40		K CELLULAR PRODUCTS	US	HAZLETON BIOTECHNOLO	US	J	DIAGNOSTICS
41		P CETUS	US	TRITON BIOSCIENCES	US	J	BETA IF
42		K COLLABORATIVE RESEAR	US	BIO-SCIENCE LABORATO	US	J	DIAGNOSTICS
43		P COLLABORATIVE RESEAR	US	TRITON BIOSCIENCES	US	J	IL-2
44		P DAMON BIOTECH	US	BIOOTHERAPY SYSTEMS	US	E	LYMPHOMA MAB
45		K GEN-PROBE	US	HYBRITECH	US	O	DNA PROBE TESTS
46		B GENETICS INSTITUTE	US	UNITED AGRISEEDS	US	J	CORN HYBRIDS
47		K HYBRIDOMA SCIENCES	US	ICL SCIENTIFIC	US	A	DIAGNOSTICS
48		K HYBRITECH	US	ACCESS MEDICALS	US	M	DIAGNOSTICS

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YEAR	CLASS	COMPANY 1	COUNTRY	COMPANY 2	COUNTRY	ACTION	PRODUCT
49	84	KP HYBRITECH	US	ADAC LABS	US	J	MABS
50		K HYBRITECH	US	GEN-PROBE	US	E	DIAGNOSTICS
51		P IMMUNEX	US	SYNTEX	US	L	INTERLEUKIN-2
52		K IMMUNO NUCLEAR	US	IMMUNO BIOTECH	US	A	RIA'S
53		V IMMUNOGENETICS	US	AMERICAN VETERINARY	US	A	
54		QV MOLECULAR GENETICS	US	PHILIPS ROXANE	US	J	BOVINE VACCINE
55		H SERAGEN	US	SCOTT LABORATORIES	US	M	TISS CULT
56		K TECHNICLONE	US	CLINETICS	US	JM	DIAGNOSTICS
57		G TECHNICLONE	US	IRVINE SCIENTIFIC	US	M	MEDIA
58		S UNIVERSITY GENETICS	US	TRANS WORLD GENETICS	US	A	
59		K VENTREX	US	BIOCLINICAL SYSTEMS	US	A	
60	85	SB ADVANCED GENETIC SCI	US	AC BIOTECHNICS	US	LJ	SNOMAX
61		K AMERICAN BIONUCLEAR	US	BIO RECOVERY TECHNOL	US	A	
62		J BATELLE MEMORIAL INS	US	ROCKWELL INTERNATION	US	J	COLLAGEN
63		P BEN-VENUE LABORATORI	US	CETUS	US	J	DRUGS
64		K BIOTECHNICA INTERNAT	US	BIOTECHNICA DIAGNOST	US		DIAGNOSTICS
65		B CALGENE	US	PHYTOGEN	US	J	COTTON
66		J CETUS	US	DELTA BIOTECHNOLOGY	US	J	YEAST ALBUMIN
67		B CETUS	US	WEYERHAEUSER	US	J	WOOD, RAW MATS
68		K CHIRON	US	PANDEX	US	J	DIAGNOSTICS
69		P CREATIVE BIOMOLECULE	US	STRYKER	US	J	GRAFT PROTEIN
70		ES DAMON BIOTECH	US	TECHNO-VENTURE	US	J	
71		VP ENDOTRONICS	US	JAPAN CHEMICAL RESEA	US	J	MAB
72		S ENZO	US	LATTINGTOWN CYTOLOGY	US	A	
73		K GEN-PROBE	US	KLEIMER PERKINS CAUF	US	O	NA
74		JM GENENTECH	US	HANSEN	US	J	RENNIN
75		P GENENTECH	US	SURVIVAL TECHNOLOGY	US	RJ	TPA
76		K GENETIC ENGINEERING	US	AGRITECH SYSTEMS	US	J	VET DIAGNOS
77		B GENETICS INSTITUTE	US	UNITED AGRISEED	US	E	AGRICULTURAL
78		K IMMUNOMEDICS	US	TECHNICARE	US	JR	DIAGNOSTIC
79		V IMMUNOMODULATORS	US	GRANADA R AND D VENT	US	J	VETERINARY
80		S LYMPHOMED	US	LIFE TECHNOLOGIES	US	A	
81		K MONOCLONAL ANTIBODIE	US	AMERICAN SCIENTIFIC	US	M	DIAGNOSTICS
82		G REPLIGEN	US	APPLIED IMMUNE SCIEN	US	J	PROTEIN A
83		OP SUMMA MEDICAL	US	ENDOTRONICS	US	J	MABS
84	86	W AGRIGENETICS	US	AGRIGENETICS RES. AS	US	A	TECHNOLOGIES
85		V AGRITECH SYSTEMS	US	PANDEX	US	L	VETERINARY DIAG
86		P AMGEN	US	CETUS	US		INTERLEUKIN-2
87		F APPLIED BIOSYSTEMS	US	KRATOS ANALYTICAL	US	A	
88		F APPLIED BIOSYSTEMS	US	SPECTROS INTERNATIONAL	US	A	
89		KP BIO-RESPONSE	US	COOPER BIOMEDICAL	US	M	BLD DX;ANTIVIR.
90		H BIO-RESPONSE	US	VENTREX	US	J	MAB'S
91		G BIOSEARCH INC	US	HP GENENCHEM	US	L	DNA SYNTH CHEM
92		P BIOTHERAPEUTICS	US	ANALYTIC BIOSYSTEMS	US	J	DRUGS
93		P BIOTHERAPEUTICS	US	SYNCOR	US	J	CANCER DRUGS
94		P CALIFORNIA BIOTECHNO	US	BYK GULDEN LOMBERG..	US	L	
95		K CENTOCOR	US	ERBAMONT	US	L	DIAGNOSTICS
96		P CENTOCOR	US	POLYCELL	US	L	MAB THERAPS

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YEAR	CLASS	COMPANY 1	COUNTRY	COMPANY 2	COUNTRY	ACTION	PRODUCT
97	86	P	CETUS	US AMGEN	US		INTERLEUKIN-2
98		P	CETUS	US BEN-VENUE LABORATORI	US	M	METHOTREXATE
99		G	CETUS	US CELLULAR PRODUCTS	US	L	IL-2
100		K	CETUS	US ENZO BIOCHEM	US	J	
101		P	CETUS	US INTELLIGENT MEDICINE	US	J	DRUG DELIVERY
102		P	CHIRON	US ETHICON	US	J	GROWTH FACTORS
103		Q	CODON	US MERRILL LYNCH TECHNO	US	E	SWINE VACCINES
104		M	CYANOTECH	US PHARMACHEM	US	C	B-CAROTENE
105		P	DAMON BIOTECH	US BIOTHERAPY SYSTEMS	US	A	
106			DIAGNON	US MELOY LABORATORIES	US	A	
107		K	DIAGNOSTIC INC	US LIFECORE BIOMEDICAL	US		
108		K	DIAGNOSTICS PASTEUR	US SERONO DIAGNOSTICS	US	J	MAB
109		K	ELECTRO-NUCLEONICS	US ORGANON TEKNIKA	US	M	
110		S	ENDOTRONICS	US SUMMA MEDICAL	US	E	
111		P	EXO VIR	US GENENTECH	US	R	EXO VIR-HZ GEL
112		P	GENENTECH	US EXO VIR	US	JL	VIRUS TREATMENT
113			HYBRIDOMA SCIENCES	US COVALENT TECHNOLOGY	US	A	
114		P	IMMUNEX	US GENZYME	US	M	IL-2
115		P	INGENE	US BIOTHERAPEUTICS	US	R	CANCER THERAPY
116		K	INTEGRATED DIAGNOSTI	US SYNCOR NPI	US		DIAGNOSTIC TESTS
117		FH	KC BIOLOGICAL	US CHARLES RIVER BIOTEC	US	A	OPTICELL
118		QV	MOLECULAR GENETICS	US MOORMAN MANUFACTURIN	US	RC	ANIMAL VACCINE
119		V	MOLECULAR GENETICS	US NORDEN LABORATORIES	US	M	ANIMAL HLTH CRE
120		B	MOLECULAR GENETICS	US TERRA INTERNATIONAL	US	J	CORN SEED
121		K	MONOCLONAL ANTIBODIE	US ALPHA LABORATORIES	US	L	MODELPLUS ELISA
122		K	MONOCLONAL ANTIBODIE	US MOBAY-HAVER	US	M	HORSE PREG TEST
123		B	O.M. SCOTT AND SONS	US AGRIDIAGNOSTICS	US	M	TURFGRAS DISEAS
124		B	PRUTECH R&D PARTNERS	US ECOGEN	US	J	INSECTICIDES
125		P	REPLIGEN	US APPLIED IMMUNESCIENC	US	J	PROTEIN A
126		P	TECHNICLONE	US DAMON BIOTECH	US	R	ANTI LYMPHOMA
127		P	TRITON BIOSCIENCES	US CETUS	US	J	B-INTERFERON
128		S	UNIVERSITY GENETICS	US DREAMSTREET SIRES IN	US	A	
129		A	UNIVERSITY GENETICS	US WORLDWIDE FARM SERVI	US	J	ANIMAL IMPROVER

DATA FOR TABLE II
NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
AGREEMENTS BETWEEN U.S. CORPORATIONS AND U.S. BT COMPANIES
JOINT PROGRAMS (UNSPECIFIED) SORTED BY YEAR AND CLASS

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YEAR	CLASS	COMPANY NAME	CORPORATION	ACTION	PRODUCT
1	81	Q BIOGEN	MERCK	J	VACCINE
2		P BIOGEN	SCHERING-PLOUGH	JE	INTERFERON
3		HW COLLABORATIVE GENETICS	DOW CHEMICAL	J	RDNA TECHNOL
4		P COLLABORATIVE RESEARCH	WARNER-LAMBERT	J	UROKINASE
5		K GENETIC SYSTEMS	SYNTEX	J	DIAGNOSTIC
6	82	K CHIRON	MERCK	J	HEPATITIS TEST
7		S GENENTECH	CORNING	J	ENZYMES
8		QV GENENTECH	INT'L MINERAL AND CHEMICAL	JL	ANIMAL VACCINE
9		A GENENTECH	MONSANTO	J	BOVINE GRTH HOR
10		PK GENETIC SYSTEMS	CUTTER	J	PSEUDOMONAS DRG
11		KP GENETIC SYSTEMS	SYVA	J	MONOCLONALS
12	83	V AMGEN	UPJOHN	J	BOVINE GH
13		K AMGEN	ABBOTT	J	DNA PROBES
14		A BIOGEN	INTERNAT MINERALS AND CHEM	JL	AMIMAL GRTH HOR
15		P BIOGEN	MONSANTO	J	TPA
16		S BIOTECHNICA INTERNATIONAL	MONSANTO	JL	EXPRESSION SYS
17		K CENTOCOR	WARNER-LAMBERT	J	DIAGNOSTIC
18		X CENTOCOR	FMC	J	IMMUNOREGULATOR
19		XK CENTOCOR	FMC	J	DIAGNOSTICS
20		P CETUS	SHELL	J	BETA INTERFERON
21		B CHIRON	MARTIN MARIETTA	J	PLANT STRAINS
22		K GENENTECH	BAXTER TRAVENOL	J	DIAGNOSTICS
23		F GENENTECH	HEWLETT-PACKARD	J	INSTRUMENTS
24		K GENETIC SYSTEMS	SYNTEX	J	DIAGNOSTICS
25		P GENETICS INSTITUTE	BAXTER TRAVENOL	J	HSA
26		P GENETICS INSTITUTE	BAXTER TRAVENOL	J	FACTOR VIII
27		P HYBRITECH	BAXTER TRAVENOL	J	MABS
28		P HYBRITECH	AMERICAN CYANAMID	J	MABS
29		K HYBRITECH	BAKER INSTRUMENTS	J	MAB BASED TESTS
30		P HYBRITECH	LEDERLE	J	MAB THERAP.
31		JG IGI BIOTECHNOLOGY	OWENS-ILLINOIS	J	
32		BS INT'L PLANT RESEARCH INST.	ELI LILLY	J	
33		A MOLECULAR GENETICS	AMERICAN CYANAMID	J	BOVINE GH
34		B REPLIGEN	FMC	J	PESTICIDES
35		A REPLIGEN	PFIZER	J	ANIMAL GRTH HOR
36		KP SUMMA MEDICAL	GENERAL ELECTRIC	J	MABS
37		K SYNBIOTICS	MILES LABS	JR	DIAGNOSTICS
38		G XENOGEN	JOHNSON & JOHNSON	J	
39	84	P BIOGEN	SMITHKLINE	J	ANTI CLOT AGENT
40		J BIOTECHNICA INTERNATIONAL	HJ HEINZ	J	PHENYLALANINE
41		J BIOTECHNICA INTERNATIONAL	UPJOHN	J	PROTEINS
42		M CETUS	NABISCO	J	FOOD PRODUCTS
43		B CETUS	W R GRACE	J	AG PRODS
44		K COLLABORATIVE RESEARCH	AMERICAN HOSPITAL SUPPLY	J	DNA PROBE TESTS
45		P COLLAGEN	MONSANTO	J	GROWTH FACTORS
46		P CYTOGEN	AMERICAN CYANAMID	J	MAB THERAPEUTIC
47		K CYTOGEN	BECTON DICKINSON	J	DIAGNOSTICS
48		B DNA PLANT TECHNOLOGY	KOPPERS	J	PLANT DIAGNOS
49		K ENZO	ORTHO DIAGNOSTICS	JM	DIAGNOSTICS
50		S GENEX	ALLIED	J	PHENYLALANINE
51		JG GENEX	SEARLE	J	PHENYLALANINE
52		P IMMUNEX	SYNTEX	J	IL-1

NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
 AGREEMENTS BETWEEN U.S. CORPORATIONS AND U.S. BT COMPANIES
 JOINT PROGRAMS (UNSPECIFIED) SORTED BY YEAR AND CLASS

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YEAR	CLASS	COMPANY NAME	CORPORATION	ACTION	PRODUCT
58	85	P CALIFORNIA BIOTECHNOLOGY	ORTHO	JM	LHRH NASAL SPRY
59		K CAMBRIDGE BIOSCIENCE	ORTHO	JE	DIAGNOSTIC
60		K CENTOCOR	DUPONT	J	DIAGNOSTICS
61		O CETUS	NATIONAL DISTILLERS AND CH	J	CORN STARCH
62		P CETUS	SCHERING PLOUGH	J	ANTIBIOTICS
63		VQ CETUS	TECHAMERICA	J	VET VACCINE
64		K CHIRON	COOPER	J	DIAGNOSTICS
65		K CHIRON	JOHNSON & JOHNSON	EJ	DIAGNOSTICS
66		P COLLAGEN	BRISTOL-MYERS	J	COLLAGEN
67		P COLLAGEN	ELI LILLY	J	CARDIOVASCULAR
68		K CYTOGEN	JOHNSON & JOHNSON	JR	MAB AND NMR DX
69		B DNA PLANT TECHNOLOGY	ARTHUR D. LITTLE	J	PLANT CLONING S
70		M DNA PLANT TECHNOLOGY	GENERAL FOODS	J	COFFEE
71		B DNA PLANT TECHNOLOGY	UNITED FRUIT	J	PLANTS
72		M DNA PLANT TECHNOLOGY	KRAFT	J	SNACK FOODS
73		M DNA PLANT TECHNOLOGY	HERSHEY	J	COCOA BEANS
74		B DNA PLANT TECHNOLOGY	AMERICAN HOME PRODUCTS	J	CORN
75		P GENENTECH	MILES LABS	J	FACTOR VIII
76		PM GENENTECH	LUBRIZOL	J	VITAMIN C
77		K GENETIC SYSTEMS	MILES LABS	J	MABS FOR INFECT
78		K GENETIC SYSTEMS	SYNTEX	EJ	IMMUNOASSAYS
79		VQ GENEX	AH ROBBINS	J	CHICKEN VACCINE
80		P GENZYME	COOPERVISION	J	OPHTHALMALOGIC
81		PX HYBRITECH	BAXTER TRAVENOL	J	PASSIVE IMMUN.
82		P IMMUNEX	EASTMAN KODAK	J	LYMPHOKINES
83		P INTERFERON SCIENCES	ANNHEUSER-BUSCH	JL	IF
84		QV MOLECULAR GENETICS	EASTMAN KODAK	J	VET. VACCINE
85		P MOLECULON	AMERICAN HOME PRODUCTS	J	TRANSDERMAL
86		V MOLECULON	UPJOHN	J	VET DRUG DELIV
87		V MONOCLONAL ANTIBODIES	RALSTON PURINA	J	VET DIAGNOSTICS
88		V NEOGEN	SQUIBB	J	VETERINARY
89		P REPLIGEN	GILLETTE	J	HAIR PRODUCT
90		K TECHNOGENETICS	WARNER-LAMBERT	J	DIAGNOSTICS
91	86	OJ ADVANCED GENETIC SCIENCES	EASTMAN KODAK	J	SNOWMAX
92		JO AMGEN	EASTMAN KODAK	JM	CHEMICALS
93		P AMGEN	SMITHKLINE	EJ	SOMATOTROPIN
94		P AMGEN	JOHNSON & JOHNSON	J	IL-2 ANALOG
95		PK APPLIED BIOTECHNOLOGY	DUPONT	J	CANCER DX, THERA
96		V CALIFORNIA BIOTECHNOLOGY	AMERICAN HOME PRODUCTS	J	PET VACCINES
97		K CETUS	EASTMAN KODAK	J	DIAGNOSTICS
98		F CETUS	PERKIN ELMER	J	INSTRUMT SYSTMS
99		K CETUS	EASTMAN KODAK	J	AIDS DIAG
100		B DNA PLANT TECHNOLOGY	DUPONT	J	PLANT VARIETIES
101		M DNA PLANT TECHNOLOGY	MONSANTO	J	SWEETENERS
102		M ENGENICS	EASTMAN KODAK	J	BIOCHEMICALS
103		O GENENTECH	CORNING GLASS	J	
104		S GENETICS INSTITUTE	INTERNATIONAL PAPER	J	
105		P IMMUNEX	EASTMAN KODAK	J	LYMPHOKINE PROD
106		MK INTEGRATED GENETICS	AMOCO	J	FOOD DIAGNOSTIC
107		P INVITRON	SEARLE	J	
108		V MOLECULAR GENETICS	EASTMAN KODAK	J	
109		P MOLECULON	BRISTOL-MYERS	J	DRUG DELIV

NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
 AGREEMENTS BETWEEN U.S. CORPORATIONS AND U.S. BT COMPANIES
 JOINT PROGRAMS (UNSPECIFIED) SORTED BY YEAR AND CLASS

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YEAR	CLASS	COMPANY NAME	CORPORATION	ACTION	PRODUCT
115 86	E	SEPRACOR	AMERICAN CYANAMID	J	MRMBRANE TECH
116	V	SYNBIOTICS	INTERNATIONAL MINERALS AND	J	DIAGNOSTICS
117	P	SYNERGEN	PROCTER AND GAMBLE	J	COLLAGENASE INH
118	P	TRITON BIOSCIENCES	CETUS	J	INTERFERON
119	F	VEGA BIOTECHNOLOGIES	DUPONT	AJ	DNA SNTHESIZERS

DATA FOR TABLE II
NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
JOINT AGREEMENTS
U.S. CORPORATIONS AND U.S. BT COMPANIES
MARKETING AGREEMENTS SORTED BY YEAR AND CLASSIFICATION
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YEAR	CLASS	COMPANY NAME	CORPORATION	ACTION	PRODUCT
1	81	K COLLABORATIVE RESEARCH	STERLING DRUG	LM	DIAGNOSTIC TEST
2		P GENENTECH	ELI LILLY	LM	INSULIN
3		P COLLAGEN	SCHERING-PLOUGH	M	INPLANTS
4		VQ CETUS	SMITHKLINE	M	LIVSTOK VACCINE
5	83	A BIO-TECHNOLOGY GENERAL	AMERICAN CYANAMID	LM	ANIMAL GRTH HOR
6		L PETROFERM	PFIZER	M	OIL EMULSIFIER
7	84	K ENZO	ORTHO DIAGNOSTICS	JM	DIAGNOSTICS
8		K CENTOCOR	ABBOTT	M	CANCER DIAG KIT
9		P GENENTECH	CUTTER LABS	LM	FACTOR VIII
10		V MOLECULAR GENETICS	UPJOHN	M	GENECOL 99
11		V RIBI IMMUNOCHEM RESEARCH	AMERICAN HOME PRODUCTS	M	VET DRUG
12	85	G BIOTECHNICA INTERNATIONAL	DUPONT	M	IN VITRO TRANS
13		K CAMBRIDGE BIOSCIENCE	AMERICAN HOSPITAL SUPPLY	ML	DIAGNOSTICS
14		K QUIDEL	BECTON DICKINSON	ME	DIAGNOSTICS
15		K HYBRITECH	CURTIS MATHESON	M	TANDEM/ICON
16		P CALIFORNIA BIOTECHNOLOGY	ORTHO	JM	LHRH NASAL SPRY
17		P GENENTECH	CUTTER BIOLOGICALS	M	CLOTTING AGENT
18		PQ AMGEN	JOHNSON & JOHNSON	JM	VACCINE, PEPTID
19		Q PRAXIS BIOLOGICS	MEAD JOHNSON	M	VACCINES
20	86	B AGRI-DIAGNOSTICS ASSOCIATE	O.M. SCOTT & SONS	M	PLANT DIAGNOSTI
21		F VEGA BIOTECHNOLOGIES	DUPONT	EM	SYNTHESIZERS
22		G T CELL SCIENCES	BOEHRINGER MANNHEIM BIOCHE	M	MONO ANTIBDS
23		JO AMGEN	EASTMAN KODAK	JM	CHEMICALS
24		K AGEN USA	AMERICAN HOSPITAL SUPPLY	M	BLOOD SCREEN KT
25		K GEN-PROBE	FISHER SCIENTIFIC	M	MYCOPLASMA KIT
26		P BIO-TECHNOLOGY GENERAL	BRISTOL-MYERS	LM	SOD
27		P DIAGNOSTIC INC	COOPERVISION	M	HYALURONIC ACID
28		P CALIFORNIA BIOTECHNOLOGY	WYETH	M	RENIN INHBITORS
29		P BIO-TECHNOLOGY GENERAL	BAXTER TRAVENOL	M	GROWTH HORMONE
30		P CALIFORNIA BIOTECHNOLOGY	AMERICAN HOME PRODUCTS	M	NAZDEL
31		Q CODON	SMITHKLINE	M	SWINE VACCINES
32		V CAMBRIDGE BIOSCIENCE	SMITHKLINE	M	FELINE LEUK KIT

DATA FOR TABLE II
NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
AGREEMENTS BETWEEN U.S. CORPORATIONS AND U.S. BT COMPANIES
RESEARCH CONTRACTS SORTED BY YEAR AND CLASS

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	YEAR	CLASS	COMPANY NAME	CORPORATION	ACTION	PRODUCT
1	81	M	DNA PLANT TECHNOLOGY	CAMPBELL SOUP CO	ER	TOMATOES
2	82	M	CETUS	STANDARD OIL OF CALIFORNIA	R	FRUCTOSE
3		S	CETUS	AMOCO	ER	JOJOBA OIL
4		J	COLLABORATIVE RESEARCH	DOW CHEMICAL	R	ENZYME RENNIN
5		P	GENEX	BRISTOL-MYERS	RC	INTERFERONS
6		MB	INT'L PLANT RESEARCH INST.	ELI LILLY	R	CEREAL PLANTS
7		K	MONOCLONAL ANTIBODIES	JOHNSON & JOHNSON	RC	PREGNANCY TEST
8	83	K	GENETICS INSTITUTE	ALLIED	R	DISEASE TEST
9		JG	GENEX	BENDIX	RC	ENZYMES
10		B	INT'L PLANT RESEARCH INST.	BIO-RAD LABORATORIES	R	
11		M	INT'L PLANT RESEARCH INST.	GENERAL FOODS	R	FOOD PROCESSING
12		P	INTERFERON SCIENCES	ANNHEUSER-BUSCH	R	
13		K	SYNBIOTICS	MILES LABS	JR	DIAGNOSTICS
14		Q	UNIVERSITY PATENTS	AMERICAN CYANAMID	R	HERPES VACCINE
15	84	JO	AMGEN	TEXACO	R	CHEMICALS
16		P	BIO-RESPONSE	ELI LILLY	RC	
17		M	BIOTECHNICA INTERNATIONAL	HJ HEINZ	R	FOOD PROCESSING
18		BM	CALGENE	CAMPBELL SOUP CO	R	TOMATOES
19		P	IMMUNEX	SMITHKLINE	R	MAF
20		K	IMMUNOMEDICS	JOHNSON & JOHNSON	R	TEST KIT
21	85	S	CALIFORNIA BIOTECHNOLOGY	AMERICAN HOME PRODUCTS	ER	ANF
22		K	CYTOGEN	JOHNSON & JOHNSON	JR	MAB AND NMR DX
23		K	DAMON BIOTECH	ELI LILLY	RC	DIAGNOSTICS
24		P	GENENTECH	MONSANTO	RC	GROWTH HORMONES
25		B	GENETICS INSTITUTE	UNIROYAL	R	PESTICIDES
26		K	MOLECULAR BIOSYSTEMS	DUPONT	R	DNA DIAGNOSTICS
27	86	I	ADVANCED GENETIC SCIENCES	DUPONT	R	
28		B	BIOTECHNICA INTERNATIONAL	UNIROYAL	R	RHIZOBIA BACT.
29		P	CALIFORNIA BIOTECHNOLOGY	ORTHO	R	NAZDEL
30		KP	CYTOGEN	EASTMAN KODAK	R	
31		M	DNA PLANT TECHNOLOGY	NUTRASWEET CO	R	SWEETENERS
32		B	ECOGEN	AMERICAN CYANAMID	RE	INSECTICIDE
33		K	ELECTRO-NUCLEONICS	PRUTECH R AND D PARTNERSHI	R	AIDS TEST
34		WP	ENDOTRONICS	CELANESE	R	IMMUNE CELLS
35		P	ENDOTRONICS	CELANESE	R	AIDS TREATMENT
36		P	GENEX	SCHERING-PLOUGH	R	PLASMA PROTEIN
37		KP	IMMUNOMEDICS	JOHNSON & JOHNSON	R	
38		M	INGENE	BEATRICE FOODS	R	SWEETENER
39		VA	SYNBIOTICS	PRUTECH R AND D PARTNERSHI	R	VACCINES, ETC.
40		PK	T CELL SCIENCES	PFIZER	R	ARTHRITIS DRUG
41		K	VENTREX	BAXTER TRAVENOL DIAGNOSTIC	R	DX REAGENTS

DATA FOR TABLE II
NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
AGREEMENTS BETWEEN U.S. CORPORATIONS AND U.S. BT COMPANIES
EQUITY PURCHASES SORTED BY YEAR AND CLASS

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YEAR	CLASS	COMPANY NAME	CORPORATION	ACTION	PRODUCT
1	81	P BIOGEN	SCHERING-PLOUGH	JE	INTERFERON
2		S BIOGEN	MONSANTO	E	
3		P COLLABORATIVE RESEARCH	DOW CHEMICAL	E	INTERFERON
4		S COLLAGEN	MONSANTO	E	COLLAGEN PRODS.
5		M DNA PLANT TECHNOLOGY	CAMPBELL SOUP CO	ER	TOMATOES
6		GENENTECH	MONSANTO	E	
7		GENEX	MONSANTO	E	
8		S MOLECULAR GENETICS	LEDERLE	E	
9	82	B AGRIGENETICS	KELLOGG COMPANY	E	SEEDS
10		S CETUS	AMOCO	ER	JOJOBA OIL
11		GS ENZO	JOHNSON & JOHNSON	E	
12		P GENETICS INSTITUTE	BAXTER TRAVENOL	E	FACTOR VIII
13		P KEY PHARMACEUTICAL	SYNTEX	E	DRUG DELIV.
14		S MOLECULAR GENETICS	MARTIN MARIETTA	E	
15		B NPI	MARTIN MARIETTA	E	PLANTS
16	83	P CYTOGEN	LEDERLE	E	CANCER DRUGS
17		S IMMUNOMODULATORS	VENTREX	E	
18		INT'L PLANT RESEARCH INST	BIO-RAD LABORATORIES	E	
19	84	K AMERICAN BIONUCLEAR	SYNTEX	E	INSTS & CHEMS.
20		SF APPLIED BIOSYSTEMS	BECTON DICKINSON	E	AIDS TEST
21		K BIOTECH RESEARCH LABS	DUPONT	E	
22		BIOTECHNICA INTERNATIONAL	GULF APPLIED TECHNOLOGIES	EL	HYALURINIC AC
23		K DIAGNOSTIC INC.	RORER	E	FOOD ENZYMES
24		M GENENCOR	A.E. STALEY MFG CO.	E	
25		S SYNERGEN	ELI LILLY	E	
26		B VIRATEK	EASTMAN KODAK	E	AGRICULTURE
27	85	S CALIFORNIA BIOTECHNOLOGY	AMERICAN HOME PRODUCTS	ER	ANF
28		K CAMBRIDGE BIOSCIENCE	ORTHO	JE	DIAGNOSTIC
29		K CHIRON	JOHNSON & JOHNSON	EJ	DIAGNOSTICS
30		K GENETIC SYSTEMS	SYNTEX	EJ	IMMUNOASSAYS
31		K MOLECULAR BIOSYSTEMS	DUPONT	E	DNA PROBE
32		B NPI	MC CORMICK	E	PLANT MB
33		ONCOGEN	BRISTOL-MYERS	E	
34		K QUIDEL	BECTON DICKINSON	ME	DIAGNOSTCS
35		S T CELL SCIENCES	SYNTEX	E	
36	86	P AMGEN	SMITHKLINE	EJ	SOMATOTROPIN
37		F CAMBRIDGE RESEARCH BIOCHEM	MILLIGEN	E	
38		P CENTOCOR	FMC	E	
39		KP CYTOGEN	EASTMAN KODAK	E	
40		B ECOGEN	AMERICAN CYANAMID	RE	INSECTICIDE
41		P ENDOTRONICS	CELANESE	E	HEPATITIS B VIR
42		H ENDOTRONICS	CELANESE	E	T-CELL THERAPY
43		P INTERFERON SCIENCES	ANNHEUSER-BUSCH	E	IF
44		F MEDI-CONTROL CORP	BIOTECHNOLOGY DEV CORP	E	DRUG DELIVERY
45		KP NEORX	EASTMAN KODAK	EJ	
46		P NOVA PHARMACEUTICALS	CELANESE	E	
47		WP ONCOGENE SCIENCE	PFIZER	EJ	ONCOGENES, GF'S
48		F VEGA BIOTECHNOLOGIES	DUPONT	EM	SYNTHESIZERS

DATA FOR TABLE II
NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
AGREEMENTS BETWEEN U.S. CORPORATIONS AND U.S. BT COMPANIES
LICENSING AGREEMENTS SORTED BY YEAR AND CLASS

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	YEAR	CLASS	COMPANY NAME	CORPORATION	ACTION	
					PRODUCT	
1	81		INTERFERON SCIENCES	BRISTOL-MYERS	L	IF
2		K	COLLABORATIVE RESEARCH	STERLING DRUG	LM	DIAGNOSTIC TEST
3		P	VIRATEK	WARNER-LAMBERT	L	ANTICANCER
4		P	GENENTECH	ELI LILLY	LM	INSULIN
5	82	K	COLLABORATIVE RESEARCH	STERLING DRUG	L	ASSAY SYSTEM
6		K	MOLECULAR GENETICS	LEDERLE	L	HERPES TEST
7		P	GENETICS INSTITUTE	BAXTER TRAVENOL	L	FACTOR VIII
8		QV	GENENTECH	INT'L MINERAL AND CHEMICAL	JL	ANIMAL VACCINE
9	83	A	BIOGEN	INTERNAT MINERALS AND CHEM	JL	ANIMAL GRTH HOR
10		A	BIO-TECHNOLOGY GENERAL	AMERICAN CYANAMID	LM	ANIMAL GRTH HOR
11		P	IMMUNEX	DIAMOND SHAMROCK	L	LYMPHOKINES
12		S	BIOTECHNICA INTERNATIONAL	MONSANTO	JL	EXPRESSION SYS
13	84	H	INVITRON	MONSANTO	L	CULTURE PRODS
14		K	SCIENTIFIC LABORATORIES	WARNER-LAMBERT	L	DIAGNOSTIC
15		K	DIAGNOSTIC INC.	RORER	EL	HYALURINIC AC
16		K	BIOTECH RESEARCH LABS	DUPONT	L	DIAGNOSTICS
17		K	IMMUNEX	BECTON DICKINSON	L	DIAGNOSTICS
18		P	GENENTECH	CUTTER LABS	LM	FACTOR VIII
19	85	K	MOLECULAR BIOSYSTEMS	DUPONT	L	AIDS TEST
20		K	HYBRITECH	AMERICAN HOSPITAL SUPPLY	L	MAB-TESTS
21		K	HYBRITECH	DUPONT	L	MAB-TESTS
22		K	CAMBRIDGE BIOSCIENCE	AMERICAN HOSPITAL SUPPLY	ML	DIAGNOSTICS
23		K	CENTOCOR	WARNER-LAMBERT	L	HEP B DIAGS
24		P	INTERFERON SCIENCES	ANNHEUSER-BUSCH	JL	IF
25		P	CALIFORNIA BIOTECHNOLOGY	ELI LILLY	L	DRUG DELIVERY
26		VQ	CAMBRIDGE BIOSCIENCE	PHILLIPS PETROLEUM	L	VET VACCINE
27	86	F	GENENTECH	NEW BRUNSWICK SCIENTIFIC	L	
28		P	BIO-TECHNOLOGY GENERAL	BRISTOL-MYERS	LM	SOD
29		P	HEPAR INDUSTRIES	AMERICAN HOME PRODUCTS	L	HEPARIN
30		P	CISTRON TECHNOLOGY	DUPONT	L	IL-2
31		P	BIOGEN	BAXTER TRAVENOL	L	G-INTERFERON

DATA FOR TABLE III
NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
AGREEMENTS BETWEEN FOREIGN CORPORATIONS AND U.S. BT COMPANIES
JOINT PROGRAMS (UNSPECIFIED) SORTED BY YEAR AND CLASS

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	YEAR	CLASS	COMPANY NAME	CORPORATION	ACTION	PRODUCT
1	81	Q	BIOGEN	GREEN CROSS	J	VACCINE
2		JX	ENZO	KINTO	J	ENZYMES
3		P	GENENTECH	HOFFMANN-LA ROCHE	J	INTERFERON
4	82	B	AGRIGENETICS	HOFFMANN-LA ROCHE	EJ	SEEDS
5		P	BIOGEN	TEIJIN	JM	FACTOR VIII
6		P	BIOGEN	YAMANOUCHI PHARMACEUTICAL	J	ANTI-INFLAM.
7		P	BIOGEN	SHIONOGI	J	HSA
8		P	BIOGEN	MEIJI SEIKA	J	ANTIBIOTIC
9		P	BIOGEN	FUJISAWA	J	TPA
10		G	BIOTECH RESEARCH LABS	FUJIZOKI	EJ	MAB
11		EP	DAMON BIOTECH	HOFFMANN-LA ROCHE	J	PURIFICATION
12		P	GENENTECH	SPEYWOOD LABORATORIES	J	FACTOR VIIIC
13		P	GENENTECH	MITSUBISHI CHEMICAL	J	TPA
14		P	GENENTECH	GRUENENTHAL GMBH	J	UROKINASE
15		S	GENENTECH	MANY JAPANESE COMPANIES	J	MANY
16		P	GENEX	mitsui TOATSU	J	UROKINASE
17		P	GENEX	GREEN CROSS	J	HSA
18		P	GENEX	YAMANOUCHI PHARMACEUTICAL	J	TPA
19		P	GENEX	SCHERING AG	J	CARDIO DRUG
20		K	HANA BIOLOGICS	RECORDATI	JE	DIAGNOSTICS
21		K	HANA BIOLOGICS	FUJIZOKI	EJ	DIAGNOSTICS
22		P	HYBRITECH	GREEN CROSS	J	IMMUNOGLOBULINS
23		H	HYBRITECH	TEIJIN	J	MABS
24		B	INT'L PLANT RESEARCH INST	SIME DARBY BERHAD	J	TROPICAL CROPS
25		P	INTERFERON SCIENCES	GREEN CROSS	J	INTERFERONS
26	83	P	BIOGEN	SUNTORY	J	TNF
27		P	BIOGEN	SHAANXI PHARMACEUTICAL BUR	J	GAMMA IF
28		K	CENTOCOR	TORAY INDUSTRIES	JL	DIAGNOSTICS
29		S	FLOW LABORATORIES	CONTACT-HOLDING	J	
30		P	GENENTECH	MITSUBISHI	J	TPA
31		P	GENEX	YOSHITOMI PHARM INDUST.	J	IL-2
32		P	INTEGRATED GENETICS	TOYOBO	JM	TPA
33		A	XENOGEN	mitsui TOATSU	J	FEED ADDITIVES
34	84	P	AMGEN	KIRIN BREWERY	J	ERYTHROPOIETIN
35		S	BATELLE DEVELOPMENT	MITSUBISHI	J	
36		Q	BIOGEN	WELLCOME BIOTECHNOLOGY	JM	VACCINE
37		B	CALGENE	RHONE-POULENC AGROCHIMIE	J	SUNFLOWERS
38		J	CHIRON	GIST-BROCADES	J	SOD
39		P	GENETICS INSTITUTE	CHUGAI PHARMACEUTICALS	JM	ERYTHROPOETIN
40		P	GENETICS INSTITUTE	SANDOZ	J	LYMPHOKINE FACT
41		P	GENEX	MONTEDISON	J	STERIODS
42		P	GENEX	BEHRINGWERKE	J	SERUM PROTEIN
43		KP	HUMAN ANTIBODY TECHNOLOGIE	KYOWA HAKKO	J	DIAGNOSTIC
44		K	HYBRITECH	TOYO SODA	JM	DIAGNOSTIC
45		P	IMMUNEX	BEHRINGWERKE	J	CSF
46		P	IMRE	PHARMACIA	J	PROTEIN A
47		K	INTEGRATED GENETICS	FUJIREBO	J	DNA PROBE
48		B	NPI	SUMITOMO	J	FOODS
49		B	PLANT GENETICS	KIRIN BREWERY	JE	SEED
50		K	UNIGENE LABORATORIES	SIGMA-TAU	J	DIAGNOSTICS
51	85	GF	APPLIED BIOSYSTEMS	JAPAN SCIENTIFIC INSTRUMEN	J	REAGENTS
52		X	BIOGEN	SUMITOMO	J	COLONY STIM FAC

NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
 AGREEMENTS BETWEEN FOREIGN CORPORATIONS AND U.S. BT COMPANIES
 JOINT PROGRAMS (UNSPECIFIED) SORTED BY YEAR AND CLASS

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YEAR	CLASS	COMPANY NAME	CORPORATION	ACTION	PRODUCT
58	85	P CREATIVE BIOMOLECULES	MENARINI	J	TPA
59		P CYTOGEN	FARMITALIA CARLA ARBA SPA	J	CA TREATMENT
60		W GENENTECH	BOEHRINGER INGELHEIM	J	RES. INSTITUTE
61		OF GENENTECH	BOEHRINGER INGELHEIM	EJ	TNF
62		K GENETIC DIAGNOSTICS	HOFFMANN-LA ROCHE	JR	MABS
63		G GENEX	PHARMACIA	J	PROTEIN A
64		P INTEGRATED GENETICS	BASF	J	TPA
65		P UNIGENE LABORATORIES	ERBAMONT	J	CALCITONIN
66		W UNIGENE LABORATORIES	CIBA-GEIGY	RJ	PROTEASE INHIB
67	86	B AGRI-DIAGNOSTICS	CIBA-GEIGY	J	DIAG. KITS
68		K CETUS		J	IN VITRO DIAGS
69		JG CHIRON	THE PETROFINA GROUP	J	INDSTRIAL ENZYM
70		PQ CHIRON	CIBA-GEIGY	J	VACCINES
71		Q CHIRON	CIBA-GEIGY	J	VACCINES
72		K ENDOTRONICS	SINO AMERICAN BIOTECHNOLOG	J	MAB DIAGNOSTICS
73		P ENDOTRONICS	NIPPON CHEMICAL INDUSTRIAL	J	HGH
74		S GENETICS INSTITUTE	GIST-BROCADES	J	
75		J GENZYME	NAGASE & CO.	J	AMYLASE
76		P IMMUNEX	HOFFMANN-LA ROCHE	J	IL-2
77		M INGENE	MITSUBISHI	J	SWEETENERS
78		V NEOGEN	SOLVAY	J	DIAGNOSTICS
79		B PRUTEC	DJ VAN DER HAVE BV	J	SEEDS
80		P SYNERGEN	CIBA-GEIGY	J	ELASTASE INHIB
81		P VIVOTECH	CANADIAN ASTRONAUTICS LTD	J	IMPLANTS
82		P ZYMOGENETICS	TEIJIN LTD	J	BLOOD FACTORS

DATA FOR TABLE III
NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
AGREEMENTS BETWEEN FOREIGN CORPORATIONS AND U.S. BT COMPANIES
EQUITY PURCHASES SORTED BY YEAR AND CLASS

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	YEAR	CLASS	COMPANY NAME	CORPORATION	ACTION	PRODUCT
1	81	P	COLLABORATIVE RESEARCH	GREEN CROSS	E	UROKINASE
2	82	B	AGRIGENETICS	HOFFMANN-LA ROCHE	EJ	SEEDS
3		G	BIOTECH RESEARCH LABS,	FUJIZOKI	EJ	MAB
4		K	HANA BIOLOGICS	FUJIZOKI	EJ	DIAGNOSTICS
5		K	HANA BIOLOGICS	RECORDATI	JE	DIAGNOSTICS
6		S	MOLECULAR DIAGNOSTICS	BAYER	E	
7		PM	ZYMOS	NOVO INDUSTRI	ER	YEAST PRODUCTS
8	83	S	REPLIGEN	C. ITOH	EM	PROTEINS
9	84	B	BIOTECHNICA INTERNATIONAL	SEAGRAMS	RE	MANY
10		B	PLANT GENETICS	KIRIN BREWERY	JE	SEED
11	85	J	BIO-TECHNOLOGY GENERAL	PHARMACIA	E	HYALURONIC ACID
12		OP	GENENTECH	BOEHRINGER INGELHEIM	EJ	TNF
13	86	P	AMGEN	AB FERMENTA	E	
14			BIOSTAR MEDICAL PRODUCTS	SKANDIGEN AB	E	
15		S	CYANOTECH	DAIKYO OIL COMPANY	E	
16			ELECTRO-NUCLEONICS	PHARMACIA	E	

DATA FOR TABLE III
NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
AGREEMENTS BETWEEN FOREIGN CORPORATIONS AND U.S. BT COMPANIES
LICENSING AGREEMENTS SORTED BY YEAR AND CLASS

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	YEAR	CLASS	COMPANY NAME	CORPORATION	ACTION	
					PRODUCT	
1	81	K	HYBRITECH	MITSUBISHI	L	ANTI IGE KIT
2	82	K	TECHNICLONE	FUJIZOKI	L	DIAGNOSTIC
3		K	ENZO	MEIJI SEIKA	LM	HCG TEST
4	83	K	CENTOCOR	TORAY INDUSTRIES	JL	DIAGNOSTICS
5		M	INNOVAX LABS	SHOW BRAND MILK	L	
6		P	COLLABORATIVE RESEARCH	GREEN CROSS	L	INTERFERON
7		P	GENENTECH	DAIICHI SEIYAKU	L	GAMMA INTERFERN
8		P	BIOGEN	SHIONOGI	L	IL-2
9	84	H	QUEUE SYSTEMS	SHIN MEIWA INDUSTRY	ML	BT PRODUCTS
10		P	COLLABORATIVE RESEARCH	SANDOZ	L	PLASMINOGEN ACT
11		P	IMMUNEX	HOFFMANN-LA ROCHE	L	INTERLEUKIN-2
12		PO	GENENTECH	FUJISAWA	LM	LYMPHOTOXIN
13		K	BIOGEN	KABIVITRUM	LM	SOMATOMEDIN C
14	85	G	BIOGEN	CIBA-GEIGY	L	YEAST PROMOTER
15		P	COLLAGEN	LEDERLE (JAPAN)	L	IMPLANT
16		Q	GENENTECH	MITSUBISHI	L	VACCINE
17		V	GENENTECH	CIBA-GEIGY	L	VETERINARY
18		W	UNIGENE LABORATORIES	TOYO SODA	L	IMMUNIZATION
19	86	S	UNIVERSITY GENETICS	L'OREAL	L	TGF

DATA FOR TABLE III
NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
AGREEMENTS BETWEEN FOREIGN CORPORATIONS AND U.S. BT COMPANIES
MARKETING AGREEMENTS SORTED BY YEAR AND CLASS

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YEAR	CLASS	COMPANY NAME	CORPORATION	ACTION	PRODUCT
1	81	PO GENENTECH	TORAY INDUSTRIES	MR	INTERFERON
2	82	H BIOASSAY SYSTEMS	TORAY INDUSTRIES	M	BIOASSAY
3		P BIOGEN	TEIJIN	JM	FACTOR VIII
4		P CENTOCOR	INTERNATIONAL CIS	M	MAB'S
5		P COLLABORATIVE RESEARCH	GREEN CROSS	M	B-INTERFERON
6		K ENZO	MEIJI SEIKA	LM	HCG TEST
7		P INTERFERON SCIENCES	GREEN CROSS	M	G-INTERFERON
8	83	MJ GENENCOR	CHRIS HANSEN'S LABORATORIU	M	RENNIN
9		P INTEGRATED GENETICS	TOYOBO	JM	TPA
10		S REPLIGEN	C. ITOH	EM	PROTEINS
11		S UNIVERSITY GENETICS	NISSHO IWAI	M	
12	84	P ATLANTIC ANTIBODIES	ORIENTAL YEAST	M	ANTISERA
13		X BIOGEN	KABIVITRUM	LM	SOMATOMEDIN C
14		Q BIOGEN	WELLCOME BIOTECHNOLOGY	JM	VACCINE
15		P CENTOCOR	HOFFMANN-LA ROCHE	M	CANCER TREATMNT
16		F ENDOTRONICS	MITSUI	M	INSTRUMENTATION
17		PO GENENTECH	FUJISAWA	LM	LYMPHOTOXIN
18		P GENETICS INSTITUTE	CHUGAI PHARMACEUTICALS	JM	ERYTHROPOETIN
19		K HYBRITECH	TOYO SODA	JM	DIAGNOSTIC
20		G MOLECULAR BIOSYSTEMS	FUNAKOSHI	M	MICROSPHERES
21		H QUEUE SYSTEMS	SHIN MEIWA INDUSTRY	ML	BT PRODUCTS
22		G VENTREX	FUNAKOSHI	M	MAB
23	85	P AMGEN	AMERSHAM INTERNATIONAL	M	GROWTH FACTORS
24		J BIOSEARCH	BIOSYNTECH BIOCHEMISCHE..	MJ	DNA PRODS
25		K DIAGNON	AMERSHAM INTERNATIONAL	M	DIAGNOSTIC
26		P GENETICS INSTITUTE	WELLCOME	M	TPA
27		V MOLECULAR GENETICS	SHIONOGI	M	ANIMAL DRUGS
28	86	Q BIOGEN	BEHRINGWERKE	M	MALARIA VACCINE
29		F BIOREACTOR TECHNOLOGY	C. ITOH	M	BIOREACTOR
30		K DIAGNOSTIC PRODUCTS	DAINIPPON INK & CHEMICAL	M	IMMUNODIAG.
31		K ELECTRO-NUCLEONICS	PHARMACIA	M	DIAGNOSTICS
32		K NOVO BIOLABS USA	NOVO INDUSTRI A/S	M	DIAGNOSTICS
33		K SERONO LABS	DIAGNOSTICS PASTEUR	M	TEST KITS
34		V SYNBIOTICS	NORDEN-EUROPE	M	VETERINARY DX

DATA FOR TABLE III
 NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
 AGREEMENTS BETWEEN FOREIGN CORPORATIONS AND U.S. BT COMPANIES
 RESEARCH CONTRACTS SORTED BY YEAR AND CLASS

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	YEAR	COMPANY NAME	CORPORATION	ACTION	PRODUCT
	CLASS				
1	81	PO GENENTECH	TORAY INDUSTRIES	MR	INTERFERON
2		B INT'L PLANT RESEARCH INST.	CLAEYS-LUCK	R	PLANTS
3	82	P GENEX	FORTIA AB	R	HYALURONIC ACID
4		KP MONOTECH LABS	EKEN	R	DIAGNOSTICS
5		PM ZYMOS	NOVO INDUSTRI	ER	YEAST PRODUCTS
6	83	P TECHNICLONE	HOFFMANN-LA ROCHE	RC	ANTIBODY
7	84	B BIOTECHNICA INTERNATIONAL	SEAGRAMS	RE	MANY
8		E UNIGENE LABORATORIES	HOFFMANN-LA ROCHE	RC	GROWTH FACTOR
9		G VEGA BIOTECHNOLOGIES	HOFFMANN-LA ROCHE	RC	
10	85	B CALGENE	KEMIRA	R	HERBECIDE TOLER
11		P GENENTECH	KABIVITRUM	R	HGH
12		K GENETIC DIAGNOSTICS	HOFFMANN-LA ROCHE	JR	MABS
13		W GENEX	WELLCOME RESEARCH LABS	R	GENE STUDY
14		W UNIGENE LABORATORIES	CIBA-GEIGY	RJ	PROTEASE INHIB
15	86	B BIOTECHNICA INTERNATIONAL	ENICHEM AGRICOLTURA SPA	R	RHIZOBIA BACT.
16		P CALIFORNIA BIOTECHNOLOGY	HOFFMANN-LA ROCHE	RC	
17		P GENEX	BEHRINGWERKE	R	THERAPU PROTEIN
18		P LIPOSOME TECHNOLOGY	TAKEDA	R	

DATA FOR 1987-88
 NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
 JOINT VENTURES BETWEEN U.S. CORPORATION AND U.S. BT COMPANIES
 SORTED BY INDUSTRY CLASSIFICATION
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#	CLASS	COMPANY 1	COMPANY 2	ACTION	PRODUCT
1	A	BIOGEN	INTERNAT MINERALS AND CHEMIC	JL	AMIMAL GRTH HOR
2	A	GENENTECH	MONSANTO	J	BOVINE GRTH HOR
3	A	MOLECULAR GENETICS	AMERICAN CYANAMID	J	BOVINE GH
4	A	REPLIGEN	PFIZER	J	ANIMAL GRTH HOR
5	B	CALGENE	DEKALB-PFIZER	J	HYB CORN SEED
6	B	CETUS	W R GRACE	J	AG PRODS
7	B	CHIRON	MARTIN MARIETTA	J	PLANT STRAINS
8	B	DNA PLANT TECHNOLOGY	ARTHUR D. LITTLE	J	PLANT CLONING S
9	B	DNA PLANT TECHNOLOGY	KOPPERS	J	PLANT DIAGNOS
10	B	DNA PLANT TECHNOLOGY	UNITED FRUIT	J	PLANTS
11	B	DNA PLANT TECHNOLOGY	AMERICAN HOME PRODUCTS	J	CORN
12	B	DNA PLANT TECHNOLOGY	DUPONT	J	PLANT VARIETIES
13	B	REPLIGEN	FMC	J	PESTICIDES
14	BS	INT'L PLANT RESEARCH INST.	ELI LILLY	J	
15	E	SEPRACOR	AMERICAN CYANAMID	J	MRMBRANE TECH
16	F	CETUS	PERKIN ELMER	J	INSTRUMT SYSTMS
17	F	GENENTECH	HEWLETT-PACKARD	J	INSTRUMENTS
18	F	VEGA BIOTECHNOLOGIES	DUPONT	AJ	DNA SNTHESIZERS
19	G	XENOGEN	JOHNSON & JOHNSON	J	
20	H	QUEUE SYSTEMS	MONSANTO	J	CELL CULT
21	HW	COLLABORATIVE GENETICS	DOW CHEMICAL	J	RDNA TECHNOL
22	J	BIOTECHNICA INTERNATIONAL	UPJOHN	J	PROTEINS
23	J	BIOTECHNICA INTERNATIONAL	HJ HEINZ	J	PHENYLALANINE
24	J	SYNERGEN	W R GRACE	J	FLAVORS/FRAGRS
25	JG	GENEX	SEARLE	J	PHENYLALANINE
26	JG	IGI BIOTECHNOLOGY	OWENS-ILLINOIS	J	
27	JO	AMGEN	EASTMAN KODAK	JM	CHEMICALS
28	K	AMGEN	ABBOTT	J	DNA PROBES
29	K	CAMBRIDGE BIOSCIENCE	ORTHO	JE	DIAGNOSTIC
30	K	CENTOCOR	DUPONT	J	DIAGNOSTICS
31	K	CENTOCOR	WARNER-LAMBERT	J	DIAGNOSTIC
32	K	CETUS	EASTMAN KODAK	J	DIAGNOSTICS
33	K	CETUS	EASTMAN KODAK	J	AIDS DIAG
34	K	CHIRON	MERCK	J	HEPATITIS TEST
35	K	CHIRON	COOPER	J	DIAGNOSTICS
36	K	CHIRON	JOHNSON & JOHNSON	EJ	DIAGNOSTICS
37	K	COLLABORATIVE RESEARCH	AMERICAN HOSPITAL SUPPLY	J	DNA PROBE TESTS
38	K	CYTOGEN	JOHNSON & JOHNSON	JR	MAB AND NMR DX
39	K	CYTOGEN	BECTON DICKINSON	J	DIAGNOSTICS
40	K	ENZO	ORTHO DIAGNOSTICS	JM	DIAGNOSTICS
41	K	GENENTECH	BAXTER TRAVENOL	J	DIAGNOSTICS
42	K	GENETIC SYSTEMS	SYNTEX	J	DIAGNOSTICS
43	K	GENETIC SYSTEMS	MILES LABS	J	MABS FOR INFECT
44	K	GENETIC SYSTEMS	SYNTEX	EJ	IMMUNOASSAYS
45	K	GENETIC SYSTEMS	SYNTEX	J	DIAGNOSTIC
46	K	HYBRITECH	BAKER INSTRUMENTS	J	MAB BASED TESTS
47	K	MONOCLONAL ANTIBODIES	ALCON LABORATORIES	J	
48	K	SYNBIOTICS	AMERICAN HOSPITAL SUPPLY	J	DIAGNOSTICS
49	K	SYNBIOTICS	MILES LABS	JR	DIAGNOSTICS
50	K	TECHNOGENETICS	WARNER-LAMBERT	J	DIAGNOSTICS
51	KP	GENETIC SYSTEMS	SYVA	J	MONOCLONALS

NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
JOINT VENTURES BETWEEN U.S. CORPORATION AND U.S. BT COMPANIES
SORTED BY INDUSTRY CLASSIFICATION
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#	CLASS	COMPANY 1	COMPANY 2	ACTION	PRODUCT
52	KP	NEORX	EASTMAN KODAK	EJ	
53	KP	SUMMA MEDICAL	GENERAL ELECTRIC	J	MABS
54	M	CETUS	NABISCO	J	FOOD PRODUCTS
55	M	DNA PLANT TECHNOLOGY	KRAFT	J	SNACK FOODS
56	M	DNA PLANT TECHNOLOGY	MONSANTO	J	SWEETENERS
57	M	DNA PLANT TECHNOLOGY	GENERAL FOODS	J	COFFEE
58	M	DNA PLANT TECHNOLOGY	KERSHEY	J	COCOA BEANS
59	M	ENGENICS	EASTMAN KODAK	J	BIOCHEMICALS
60	M	NUTRISearch CO	EASTMAN KODAK	J	FOOD INGREDIENT
61	MK	INTEGRATED GENETICS	AMOCO	J	FOOD DIAGNOSTIC
62	O	CETUS	NATIONAL DISTILLERS AND CHEM	J	CORN STARCH
63	O	GENENTECH	CORNING GLASS	J	
64	OJ	ADVANCED GENETIC SCIENCES	EASTMAN KODAK	J	SNOWMAX
65	P	AMGEN	SMITHKLINE	EJ	SOMATOTROPIN
66	P	AMGEN	JOHNSON & JOHNSON	J	IL-2 ANALOG
67	P	BIOGEN	SCHERING-PLOUGH	JE	INTERFERON
68	P	BIOGEN	SMITHKLINE	J	ANTI CLOT AGENT
69	P	BIOGEN	MONSANTO	J	TPA
70	P	CALIFORNIA BIOTECHNOLOGY	ORTHO	JM	LHRH NASAL SPRY
71	P	CETUS	SCHERING PLOUGH	J	ANTIBIOTICS
72	P	CETUS	SHELL	J	BETA INTERFERON
73	P	COLLABORATIVE RESEARCH	WARNER-LAMBERT	J	UROKINASE
74	P	COLLAGEN	MONSANTO	J	GROWTH FACTORS
75	P	COLLAGEN	ELI LILLY	J	CARDIOVASCULAR
76	P	COLLAGEN	BRISTOL-MYERS	J	COLLAGEN
77	P	CYTOGEN	AMERICAN CYANAMID	J	MAB THERAPEUTIC
78	P	GENENTECH	MILES LABS	J	FACTOR VIII
79	P	GENETICS INSTITUTE	BAXTER TRAVENOL	J	FACTOR VIII
80	P	GENETICS INSTITUTE	BAXTER TRAVENOL	J	HSA
81	P	GENZYME	COOPERVISION	J	OPHTHALMALOGIC
82	P	HYBRITECH	AMERICAN CYANAMID	J	MABS
83	P	HYBRITECH	LEDERLE	J	MAB THERAP.
84	P	HYBRITECH	BAXTER TRAVENOL	J	MABS
85	P	IMMUNEX	EASTMAN KODAK	J	LYMPHOKINES
86	P	IMMUNEX	EASTMAN KODAK	J	LYMPHOKINE PROD
87	P	IMMUNEX	SYNTEX	J	IL-1
88	P	INTERFERON SCIENCES	ANNHEUSER-BUSCH	JL	IF
89	P	INVITRON	SEARLE	J	
90	P	MOLECULON	AMERICAN HOME PRODUCTS	J	TRANSDERMAL
91	P	MOLECULON	BRISTOL-MYERS	J	DRUG DELIV
92	P	NOVACEL	CELANESE	J	
93	P	REPLIGEN	GILLETTE	J	HAIR PRODUCT
94	P	SYNERGEN	PROCTER AND GAMBLE	J	COLLAGENASE INH
95	P	TRITON BIOSCIENCES	CETUS	J	INTERFERON
96	PK	APPLIED BIOTECHNOLOGY	DUPONT	J	CANCER DX, THERA
97	PK	GENETIC SYSTEMS	CUTTER	J	PSEUDOMONAS DRG
98	PM	GENENTECH	LUBRIZOL	J	VITAMIN C
99	PQ	AMGEN	JOHNSON & JOHNSON	JM	VACCINE, PEPTID
100	PX	HYBRITECH	BAXTER TRAVENOL	J	PASSIVE IMMUN.
101	Q	BIOGEN	MERCK	J	VACCINE
102	QV	GENENTECH	INT'L MINERAL AND CHEMICAL	JL	ANIMAL VACCINE

NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
JOINT VENTURES BETWEEN U.S. CORPORATION AND U.S. BT COMPANIES
SORTED BY INDUSTRY CLASSIFICATION

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#	CLASS	COMPANY 1	COMPANY 2	ACTION	PRODUCT
103	QV	MOLECULAR GENETICS	EASTMAN KODAK	J	VET. VACCINE
104	S	BIOTECHNICA INTERNATIONAL	MONSANTO	JL	EXPRESSION SYS
105	S	GENENTECH	CORNING	J	ENZYMES
106	S	GENETICS INSTITUTE	INTERNATIONAL PAPER	J	
107	S	GENEX	ALLIED	J	PHENYLALANINE
108	V	AMGEN	UPJOHN	J	BOVINE GH
109	V	CALIFORNIA BIOTECHNOLOGY	AMERICAN HOME PRODUCTS	J	PET VACCINES
110	V	MOLECULAR GENETICS	EASTMAN KODAK	J	
111	V	MOLECULON	UPJOHN	J	VET DRUG DELIV
112	V	MONOCLONAL ANTIBODIES	RALSTON PURINA	J	VET DIAGNOSTICS
113	V	NEOGEN	SQUIBB	J	VETERINARY
114	V	SYNBIOTICS	INTERNATIONAL MINERALS AND C	J	DIAGNOSTICS
115	VQ	CETUS	TECHAMERICA	J	VET VACCINE
116	VQ	GENEX	AH ROBBINS	J	CHICKEN VACCINE
117	WP	ONCOGENE SCIENCE	PFIZER	EJ	ONCOGENES, GF'S
118	X	CENTOCOR	FMC	J	IMMUNOREGULATOR
119	XK	CENTOCOR	FMC	J	DIAGNOSTICS

DATA FOR TABLE IV
NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
LICENSING AGREEMENTS BETWEEN U.S. CORPORATION AND U.S. BT COMPANIES
SORTED BY INDUSTRY CLASSIFICATION
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#	CLASS	COMPANY 1	COMPANY 2	ACTION	PRODUCT
1		INTERFERON SCIENCES	BRISTOL-MYERS	L	IF
2	A	BIO-TECHNOLOGY GENERAL	AMERICAN CYANAMID	LM	ANIMAL GRTH HOR
3	A	BIOGEN	INTERNAT MINERALS AND CHEMIC	JL	ANIMAL GRTH HOR
4	F	GENENTECH	NEW BRUNSWICK SCIENTIFIC	L	
5	H	INVITRON	MONSANTO	L	CULTURE PRODS
6	K	BIOTECH RESEARCH LABS	DUPONT	L	DIAGNOSTICS
7	K	CAMBRIDGE BIOSCIENCE	AMERICAN HOSPITAL SUPPLY	ML	DIAGNOSTICS
8	K	CENTOCOR	WARNER-LAMBERT	L	HEP B DIAGS
9	K	COLLABORATIVE RESEARCH	STERLING DRUG	LM	DIAGNOSTIC TEST
10	K	COLLABORATIVE RESEARCH	STERLING DRUG	L	ASSAY SYSTEM
11	K	DIAGNOSTIC INC.	RORER	EL	HYALURINIC AC
12	K	HYBRITECH	DUPONT	L	MAB-TESTS
13	K	HYBRITECH	AMERICAN HOSPITAL SUPPLY	L	MAB-TESTS
14	K	IMMUNEX	BECTON DICKINSON	L	DIAGNOSTICS
15	K	MOLECULAR BIOSYSTEMS	DUPONT	L	AIDS TEST
16	K	MOLECULAR GENETICS	LEDERLE	L	HERPES TEST
17	K	SCIENTIFIC LABORATORIES	WARNER-LAMBERT	L	DIAGNOSTIC
18	P	BIO-TECHNOLOGY GENERAL	BRISTOL-MYERS	LM	SOD
19	P	BIOGEN	BAXTER TRAVENOL	L	G-INTERFERON
20	P	CALIFORNIA BIOTECHNOLOGY	ELI LILLY	L	DRUG DELIVERY
21	P	CISTRON TECHNOLOGY	DUPONT	L	IL-2
22	P	GENENTECH	ELI LILLY	LM	INSULIN
23	P	GENENTECH	CUTTER LABS	LM	FACTOR VIII
24	P	GENETICS INSTITUTE	BAXTER TRAVENOL	L	FACTOR VIII
25	P	HEPAR INDUSTRIES	AMERICAN HOME PRODUCTS	L	HEPARIN
26	P	IMMUNEX	DIAMOND SHAMROCK	L	LYMPHOKINES
27	P	INTERFERON SCIENCES	ANNHEUSER-BUSCH	JL	IF
28	P	VIRATEK	WARNER-LAMBERT	L	ANTICANCER
29	QV	GENENTECH	INT'L MINERAL AND CHEMICAL	JL	ANIMAL VACCINE
30	S	BIOTECHNICA INTERNATIONAL	MONSANTO	JL	EXPRESSION SYS
31	VQ	CAMBRIDGE BIOSCIENCE	PHILLIPS PETROLEUM	L	VET VACCINE

DATA FOR TABLE IV
NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
MARKETING AGREEMENTS BETWEEN U.S. CORPORATION AND U.S. BT COMPANIES
SORTED BY INDUSTRY CLASSIFICATION
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#	CLASS	COMPANY 1	COMPANY 2	ACTION	PRODUCT
1	A	BIO-TECHNOLOGY GENERAL	AMERICAN CYANAMID	LM	ANIMAL GRTH HOR
2	B	AGRI-DIAGNOSTICS ASSOCIATES	O.M. SCOTT & SONS	M	PLANT DIAGNOSTI
3	F	VEGA BIOTECHNOLOGIES	DUPONT	EM	SYNTHESIZERS
4	G	BIOTECHNICA INTERNATIONAL	DUPONT	M	IN VITRO TRANS
5	G	T CELL SCIENCES	BOEHRINGER MANNHEIM BIOCHEM.	M	MONO ANTIBDS
6	JO	AMGEN	EASTMAN KODAK	JM	CHEMICALS
7	K	AGEN USA	AMERICAN HOSPITAL SUPPLY	M	BLOOD SCREEN KT
8	K	CAMBRIDGE BIOSCIENCE	AMERICAN HOSPITAL SUPPLY	ML	DIAGNOSTICS
9	K	CENTOCOR	ABBOTT	M	CANCER DIAG KIT
10	K	COLLABORATIVE RESEARCH	STERLING DRUG	LM	DIAGNOSTIC TEST
11	K	ENZO	ORTHO DIAGNOSTICS	JM	DIAGNOSTICS
12	K	GENPROBE	FISHER SCIENTIFIC	M	MYCOPLASMA KIT
13	K	HYBRITECH	CURTIS MATHESON	M	TANDEM/ICON
14	K	QUIDEL	BECTON DICKINSON	ME	DIAGNOSTCS
15	L	PETROFERM	PFIZER	M	OIL EMULSIFIER
16	P	BIO-TECHNOLOGY GENERAL	BAXTER TRAVENOL	M	GROWTH HORMONE
17	P	BIO-TECHNOLOGY GENERAL	BRISTOL-MYERS	LM	SOD
18	P	CALIFORNIA BIOTECHNOLOGY	ORTHO	JM	LHRH NASAL SPRY
19	P	CALIFORNIA BIOTECHNOLOGY	AMERICAN HOME PRODUCTS	M	NAZDEL
20	P	CALIFORNIA BIOTECHNOLOGY	WYETH	M	RENIN INHBITORS
21	P	COLLAGEN	SCHERING-PLOUGH	M	INPLANTS
22	P	DIAGNOSTIC INC	COOPERVISION	M	HYALURONIC ACID
23	P	GENENTECH	CUTTER BIOLOGICALS	M	CLOTTING AGENT
24	P	GENENTECH	ELI LILLY	LM	INSULIN
25	P	GENENTECH	CUTTER LABS	LM	FACTOR VIII
26	PQ	AMGEN	JOHNSON & JOHNSON	JM	VACCINE, PEPTID
27	Q	CODON	SMITHKLINE	M	SWINE VACCINES
28	Q	PRAXIS BIOLOGICS	MEAD JOHNSON	M	VACCINES
29	V	CAMBRIDGE BIOSCIENCE	SMITHKLINE	M	FELINE LEUK KIT
30	V	MOLECULAR GENETICS	UPJOHN	M	GENECOL 99
31	V	RIBI IMMUNOCHEM RESEARCH	AMERICAN HOME PRODUCTS	M	VET DRUG
32	VQ	CETUS	SMITHKLINE	M	LIVSTOK VACCINE
33	Y	GEN-PROBE	FISCHER SCIENTIFIC	M	MYCOPLASMA KITS

DATA FOR TABLE IV
NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
RESEARCH CONTRACTS BETWEEN U.S. CORPORATION AND U.S. BT COMPANIES
SORTED BY INDUSTRY CLASSIFICATION
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#	CLASS	COMPANY 1	COMPANY 2	ACTION	PRODUCT
1	B	BIOTECHNICA INTERNATIONAL	UNIROYAL	R	RHIZOBIA BACT.
2	B	ECOGEN	AMERICAN CYANAMID	RE	INSECTICIDE
3	B	GENETICS INSTITUTE	UNIROYAL	R	PESTICIDES
4	B	INT'L PLANT RESEARCH INST.	BIO-RAD LABORATORIES	R	
5	BM	CALGENE	CAMPBELL SOUP CO	R	TOMATOES
6	I	ADVANCED GENETIC SCIENCES	DUPONT	R	
7	J	COLLABORATIVE RESEARCH	DOW CHEMICAL	R	ENZYME RENNIN
8	JG	GENEX	BENDIX	RC	ENZYMES
9	JO	AMGEN	TEXACO	R	CHEMICALS
10	K	CYTOGEN	JOHNSON & JOHNSON	JR	MAB AND NMR DX
11	K	DAMON BIOTECH	ELI LILLY	RC	DIAGNOSTICS
12	K	ELECTRO-NUCLEONICS	PRUTECH R AND D PARTNERSHIP	R	AIDS TEST
13	K	GENETICS INSTITUTE	ALLIED	R	DISEASE TEST
14	K	IMMUNOMEDICS	JOHNSON & JOHNSON	R	TEST KIT
15	K	MOLECULAR BIOSYSTEMS	DUPONT	R	DNA DIAGNOSTICS
16	K	MONOCLONAL ANTIBODIES	JOHNSON & JOHNSON	RC	PREGNANCY TEST
17	K	SYNBIOTICS	MILES LABS	JR	DIAGNOSTICS
18	K	VENTREX	BAXTER TRAVENOL DIAGNOSTICS	R	DX REAGENTS
19	KP	CYTOGEN	EASTMAN KODAK	R	
20	KP	IMMUNOMEDICS	JOHNSON & JOHNSON	R	
21	M	BIOTECHNICA INTERNATIONAL	HJ HEINZ	R	FOOD PROCESSING
22	M	CETUS	STANDARD OIL OF CALIFORNIA	R	FRUCTOSE
23	M	DNA PLANT TECHNOLOGY	CAMPBELL SOUP CO	ER	TOMATOES
24	M	DNA PLANT TECHNOLOGY	NUTRASWEET CO	R	SWEETENERS
25	M	INGENE	BEATRICE FOODS	R	SWEETENER
26	M	INT'L PLANT RESEARCH INST.	GENERAL FOODS	R	FOOD PROCESSING
27	MB	INT'L PLANT RESEARCH INST.	ELI LILLY	R	CEREAL PLANTS
28	P	BIO-RESPONSE	ELI LILLY	RC	
29	P	CALIFORNIA BIOTECHNOLOGY	ORTHO	R	NAZDEL
30	P	ENDOTRONICS	CELANESE	R	AIDS TREATMENT
31	P	GENENTECH	MONSANTO	RC	GROWTH HORMONES
32	P	GENEX	SCHERING-PLOUGH	R	PLASMA PROTEIN
33	P	GENEX	BRISTOL-MYERS	RC	INTERFERONS
34	P	IMMUNEX	SMITHKLINE	R	MAF
35	P	INTERFERON SCIENCES	ANNHEUSER-BUSCH	R	
36	PK	T CELL SCIENCES	PFIZER	R	ARTHRITIS DRUG
37	Q	UNIVERSITY PATENTS	AMERICAN CYANAMID	R	HERPES VACCINE
38	S	CALIFORNIA BIOTECHNOLOGY	AMERICAN HOME PRODUCTS	ER	ANF
39	S	CETUS	AMOCO	ER	JOJOBA OIL
40	VA	SYNBIOTICS	PRUTECH R AND D PARTNERSHIP	R	VACCINES, ETC.
41	WP	ENDOTRONICS	CELANESE	R	IMMUNE CELLS

DATA FOR TABLE V

NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
ALL JOINT AGREEMENTS BETWEEN U.S. CORPORATION AND U.S. BT COMPANIES
SORTED BY INDUSTRY CLASSIFICATION
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#	YEAR	COMPANY 1	COMPANY 2	PRODUCT
	CLASS			ACTION
1	81	GENENTECH	MONSANTO	E
2	81	GENEX	MONSANTO	E
3	81	INTERFERON SCIENCES	BRISTOL-MYERS	L IF
4	81 G	NEW ENGLAND NUCLEAR	DUPONT	A REAGENTS
5	81 HW	COLLABORATIVE GENETICS	DOW CHEMICAL	J RDNA TECHNOL
6	81 K	COLLABORATIVE RESEARCH	STERLING DRUG	LM DIAGNOSTIC TEST
7	81 K	GENETIC SYSTEMS	SYNTEX	J DIAGNOSTIC
8	81 M	DNA PLANT TECHNOLOGY	CAMPBELL SOUP CO	ER TOMATOES
9	81 O	BENTLY LABS	AMERICAN HOSPITAL SUPPLY	A
10	81 P	BIOGEN	SCHERING-PLOUGH	JE INTERFERON
11	81 P	COLLABORATIVE RESEARCH	DOW CHEMICAL	E INTERFERON
12	81 P	COLLABORATIVE RESEARCH	WARNER-LAMBERT	J UROKINASE
13	81 P	COLLAGEN	SCHERING-PLOUGH	M INPLANTS
14	81 P	GENENTECH	ELI LILLY	LM INSULIN
15	81 P	VIRATEK	WARNER-LAMBERT	L ANTICANCER
16	81 Q	BIOGEN	MERCK	J VACCINE
17	81 S	BIOGEN	MONSANTO	E
18	81 S	COLLAGEN	MONSANTO	E COLLAGEN PRODS.
19	81 S	MOLECULAR GENETICS	LEDERLE	E
20	81 VQ	CETUS	SMITHKLINE	M LIVSTOK VACCINE
21	82 A	GENENTECH	MONSANTO	J BOVINE GRTH HOR
22	82 B	AGRIGENETICS	KELLOGG COMPANY	E SEEDS
23	82 B	NPI	MARTIN MARIETTA	E PLANTS
24	82 GS	ENZO	JOHNSON & JOHNSON	E
25	82 J	COLLABORATIVE RESEARCH	DOW CHEMICAL	R ENZYME RENIN
26	82 K	ACUGENICS	COOPER BIOMEDICAL	A DIAGNOSTICS
27	82 K	BIO-SCIENCES ENTERPRISES	AMERICAN HOSPITAL SUPPLY	A DIAG. TEST KITS
28	82 K	CHIRON	MERCK	J HEPATITIS TEST
29	82 K	COLLABORATIVE RESEARCH	STERLING DRUG	L ASSAY SYSTEM
30	82 K	MOLECULAR GENETICS	LEDERLE	L HERPES TEST
31	82 K	MONOCLONAL ANTIBODIES	JOHNSON & JOHNSON	RC PREGNANCY TEST
32	82 KP	GENETIC SYSTEMS	SYVA	J MONOCLONALS
33	82 M	CETUS	STANDARD OIL OF CALIFORNIA	R FRUCTOSE
34	82 MB	INT'L PLANT RESEARCH INST.	ELI LILLY	R CEREAL PLANTS
35	82 P	GENETICS INSTITUTE	BAXTER TRAVENOL	E FACTOR VIII
36	82 P	GENETICS INSTITUTE	BAXTER TRAVENOL	L FACTOR VIII
37	82 P	GENEX	BRISTOL-MYERS	RC INTERFERONS
38	82 P	KEY PHARMACEUTICAL	SYNTEX	E DRUG DELIV.
39	82 PK	GENETIC SYSTEMS	CUTTER	J PSEUDOMONAS DRG
40	82 QV	GENENTECH	INT'L MINERAL AND CHEMICAL	JL ANIMAL VACCINE
41	82 S	CETUS	AMOCO	ER JOJOBA OIL
42	82 S	GENENTECH	CORNING	J ENZYMES
43	82 S	MOLECULAR GENETICS	MARTIN MARIETTA	E
44	83	INT'L PLANT RESEARCH INST	BIO-RAD LABORATORIES	E
45	83 A	BIO-TECHNOLOGY GENERAL	AMERICAN CYANAMID	LM ANIMAL GRTH HOR
46	83 A	BIOGEN	INTERNAT MINERALS AND CHEMIC	JL ANIMAL GRTH HOR
47	83 A	MOLECULAR GENETICS	AMERICAN CYANAMID	J BOVINE GH
48	83 A	REPLIGEN	PFIZER	J ANIMAL GRTH HOR
49	83 B	CHIRON	MARTIN MARIETTA	J PLANT STRAINS
50	83 B	INT'L PLANT RESEARCH INST.	BIO-RAD LABORATORIES	R
51	83 B	REPLIGEN	FMC	J PESTICIDES

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ALL JOINT AGREEMENTS BETWEEN U.S. CORPORATION AND U.S. BT COMPANIES
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#	YEAR	CLASS	COMPANY 1	COMPANY 2	ACTION	PRODUCT
52	83	BS	INT'L PLANT RESEARCH INST.	ELI LILLY	J	
53	83	F	AMICON	W R GRACE	A	FILTRATION
54	83	F	GENENTECH	HEWLETT-PACKARD	J	INSTRUMENTS
55	83	G	XENOGEN	JOHNSON & JOHNSON	J	
56	83	JG	GENEX	BENDIX	RC	ENZYMES
57	83	JG	IGI BIOTECHNOLOGY	OWENS-ILLINOIS	J	
58	83	K	AMGEN	ABBOTT	J	DNA PROBES
59	83	K	CENTOCOR	WARNER-LAMBERT	J	DIAGNOSTIC
60	83	K	GENENTECH	BAXTER TRAVENOL	J	DIAGNOSTICS
61	83	K	GENETIC SYSTEMS	SYNTEX	J	DIAGNOSTICS
62	83	K	GENETICS INSTITUTE	ALLIED	R	DISEASE TEST
63	83	K	HYBRITECH	BAKER INSTRUMENTS	J	MAB BASED TESTS
64	83	K	IMMULOK	JOHNSON & JOHNSON	A	DIAGNOSTICS
65	83	K	SYNBIOTICS	MILES LABS	JR	DIAGNOSTICS
66	83	K	WORTHINGTON DIAGNOSTICS	COOPER	A	DIAGNOSTICS
67	83	KP	SUMMA MEDICAL	GENERAL ELECTRIC	J	MABS
68	83	L	PETROFERM	PFIZER	M	OIL EMULSIFIER
69	83	M	INT'L PLANT RESEARCH INST.	GENERAL FOODS	R	FOOD PROCESSING
70	83	P	BIOGEN	MONSANTO	J	TPA
71	83	P	CETUS	SHELL	J	BETA INTERFERON
72	83	P	CYTOGEN	LEDERLE	E	CANCER DRUGS
73	83	P	GENETICS INSTITUTE	BAXTER TRAVENOL	J	FACTOR VIII
74	83	P	GENETICS INSTITUTE	BAXTER TRAVENOL	J	HSA
75	83	P	HYBRITECH	AMERICAN CYANAMID	J	MABS
76	83	P	HYBRITECH	BAXTER TRAVENOL	J	MABS
77	83	P	HYBRITECH	LEDERLE	J	MAB THERAP.
78	83	P	IMMUNEX	DIAMOND SHAMROCK	L	LYMPHOKINES
79	83	P	INTERFERON SCIENCES	ANNHEUSER-BUSCH	R	
80	83	Q	UNIVERSITY PATENTS	AMERICAN CYANAMID	R	HERPES VACCINE
81	83	S	BIOTECHNICA INTERNATIONAL	MONSANTO	JL	EXPRESSION SYS
82	83	S	IMMUNOMODULATORS	VENTREX	E	
83	83	V	AMGEN	UPJOHN	J	BOVINE GH
84	83	X	CENTOCOR	FMC	J	IMMUNOREGULATOR
85	83	XK	CENTOCOR	FMC	J	DIAGNOSTICS
86	84		AGRIGENETICS	LUBRIZOL	A	
87	84		BIOTECHNICA INTERNATIONAL	GULF APPLIED TECHNOLOGIES	E	
88	84	B	CETUS	W R GRACE	J	AG PRODS
89	84	B	DNA PLANT TECHNOLOGY	KOPPERS	J	PLANT DIAGNOS
90	84	B	VIRATEK	EASTMAN KODAK	E	AGRICULTURE
91	84	BM	CALGENE	CAMPBELL SOUP CO	R	TOMATOES
92	84	G	ATLANTIC ANTIBODIES	CHARLES RIVER LABS	A	AB'S
93	84	H	INVITRON	MONSANTO	L	CULTURE PRODS
94	84	H	QUEUE SYSTEMS	MONSANTO	J	CELL CULT
95	84	J	BIOTECHNICA INTERNATIONAL	UPJOHN	J	PROTEINS
96	84	J	BIOTECHNICA INTERNATIONAL	HJ HEINZ	J	PHENYLALANINE
97	84	J	SYNERGEN	W R GRACE	J	FLAVORS/FRAGRS
98	84	JG	GENEX	SEARLE	J	PHENYLALANINE
99	84	JO	AMGEN	TEXACO	R	CHEMICALS
100	84	K	AMERICAN BIONUCLEAR	SYNTEX	E	
101	84	K	BIOTECH RESEARCH LABS	DUPONT	E	AIDS TEST
102	84	K	BIOTECH RESEARCH LABS	DUPONT	L	DIAGNOSTICS

NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
ALL JOINT AGREEMENTS BETWEEN U.S. CORPORATION AND U.S. BT COMPANIES
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#	YEAR	CLASS	COMPANY 1	COMPANY 2	ACTION	PRODUCT
103	84	K	CENTOCOR	ABBOTT	M	CANCER DIAG KIT
104	84	K	COLLABORATIVE RESEARCH	AMERICAN HOSPITAL SUPPLY	J	DNA PROBE TESTS
105	84	K	CYTOGEN	BECTON DICKINSON	J	DIAGNOSTICS
106	84	K	DIAGNOSTIC INC.	RORER	EL	HYALURINIC AC
107	84	K	ENZO	ORTHO DIAGNOSTICS	JM	DIAGNOSTICS
108	84	K	IMMUNEX	BECTON DICKINSON	L	DIAGNOSTICS
109	84	K	IMMUNOMEDICS	JOHNSON & JOHNSON	R	TEST KIT
110	84	K	SCIENTIFIC LABORATORIES	WARNER-LAMBERT	L	DIAGNOSTIC
111	84	K	SYNBIOTICS	AMERICAN HOSPITAL SUPPLY	J	DIAGNOSTICS
112	84	K	VIRAGEN	AUTOMATED MEDICAL LABS	A	
113	84	M	BIOTECHNICA INTERNATIONAL	HJ HEINZ	R	FOOD PROCESSING
114	84	M	CETUS	NABISCO	J	FOOD PRODUCTS
115	84	M	GENENCOR	A.E.STALEY MFG CO.	E	FOOD ENZYMES
116	84	M	SANOFI	DAIRYLAND FOOD LABORATORIES	A	CHEESE
117	84	P	BIO-RESPONSE	ELI LILLY	RC	
118	84	P	BIOGEN	SMITHKLINE	J	ANTI CLOT AGENT
119	84	P	COLLAGEN	MONSANTO	J	GROWTH FACTORS
120	84	P	CYTOGEN	AMERICAN CYANAMID	J	MAB THERAPEUTIC
121	84	P	GENENTECH	CUTTER LABS	LM	FACTOR VIII
122	84	P	IMMUNEX	SMITHKLINE	R	MAF
123	84	P	IMMUNEX	SYNTEX	J	IL-1
124	84	S	GENEX	ALLIED	J	PHENYLALANINE
125	84	S	SYNERGEN	ELI LILLY	E	
126	84	SF	APPLIED BIOSYSTEMS	BECTON DICKINSON	E	INSTS & CHEMS.
127	84	V	MOLECULAR GENETICS	UPJOHN	M	GENECOL 99
128	84	V	RIBI IMMUNOCHEM RESEARCH	AMERICAN HOME PRODUCTS	M	VET DRUG
129	85		ONCOGEN	BRISTOL-MYERS	E	
130	85	B	CALGENE	DEKALB-PFIZER	J	HYB CORN SEED
131	85	B	DNA PLANT TECHNOLOGY	AMERICAN HOME PRODUCTS	J	CORN
132	85	B	DNA PLANT TECHNOLOGY	UNITED FRUIT	J	PLANTS
133	85	B	DNA PLANT TECHNOLOGY	ARTHUR D. LITTLE	J	PLANT CLONING S
134	85	B	GENETICS INSTITUTE	UNIROYAL	R	PESTICIDES
135	85	B	NPI	MC CORMICK	E	PLANT MB
136	85	G	BIOTECHNICA INTERNATIONAL	DUPONT	M	IN VITRO TRANS
137	85	K	BARTELS IMMUNODIAGNOSTIC SUP	AMERICAN HOSPITAL SUPPLY	A	DIAGNOSTICS
138	85	K	CAMBRIDGE BIOSCIENCE	ORTHO	JE	DIAGNOSTIC
139	85	K	CAMBRIDGE BIOSCIENCE	AMERICAN HOSPITAL SUPPLY	ML	DIAGNOSTICS
140	85	K	CENTOCOR	WARNER-LAMBERT	L	HEP B DIAGS
141	85	K	CENTOCOR	DUPONT	J	DIAGNOSTICS
142	85	K	CHIRON	COOPER	J	DIAGNOSTICS
143	85	K	CHIRON	JOHNSON & JOHNSON	EJ	DIAGNOSTICS
144	85	K	CYTOGEN	JOHNSON & JOHNSON	JR	MAB AND NMR DX
145	85	K	DAMON BIOTECH	ELI LILLY	RC	DIAGNOSTICS
146	85	K	GENETIC SYSTEMS	MILES LABS	J	MABS FOR INFECT
147	85	K	GENETIC SYSTEMS	SYNTEX	EJ	IMMUNOASSAYS
148	85	K	HYBRITECH	CURTIS MATHESON	M	TANDEM/ICON
149	85	K	HYBRITECH	AMERICAN HOSPITAL SUPPLY	L	MAB-TESTS
150	85	K	HYBRITECH	DUPONT	L	MAB-TESTS
151	85	K	MOLECULAR BIOSYSTEMS	DUPONT	E	DNA PROBE
152	85	K	MOLECULAR BIOSYSTEMS	DUPONT	L	AIDS TEST
153	85	K	MOLECULAR BIOSYSTEMS	DUPONT	R	DNA DIAGNOSTICS

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#	YEAR	COMPANY 1	COMPANY 2	ACTION	PRODUCT
		CLASS			
154	85	K	QUIDEL	ME	DIAGNOSTICS
155	85	K	TECHNOGENETICS	J	DIAGNOSTICS
156	85	KP	HYBRITECH	A	MABS
157	85	M	DNA PLANT TECHNOLOGY	J	SNACK FOODS
158	85	M	DNA PLANT TECHNOLOGY	J	COFFEE
159	85	M	DNA PLANT TECHNOLOGY	J	COCOA BEANS
160	85	O	CETUS	J	CORN STARCH
161	85	P	CALIFORNIA BIOTECHNOLOGY	JM	LHRH NASAL SPRY
162	85	P	CALIFORNIA BIOTECHNOLOGY	L	DRUG DELIVERY
163	85	P	CETUS	J	ANTIBIOTICS
164	85	P	COLLAGEN	J	CARDIOVASCULAR
165	85	P	COLLAGEN	J	COLLAGEN
166	85	P	GENENTECH	J	FACTOR VIII
167	85	P	GENENTECH	RC	GROWTH HORMONES
168	85	P	GENENTECH	M	CLOTTING AGENT
169	85	P	GENZYME	J	OPHTHALMALOGIC
170	85	P	IMMUNEX	J	LYMPHOKINES
171	85	P	INTERFERON SCIENCES	JL	IF
172	85	P	MOLECULON	J	TRANSDERMAL
173	85	P	REPLIGEN	J	HAIR PRODUCT
174	85	PM	GENENTECH	J	VITAMIN C
175	85	PQ	AMGEN	JM	VACCINE, PEPTID
176	85	PX	HYBRITECH	J	PASSIVE IMMUN.
177	85	Q	PRAXIS BIOLOGICS	M	VACCINES
178	85	QV	MOLECULAR GENETICS	J	VET. VACCINE
179	85	S	CALIFORNIA BIOTECHNOLOGY	ER	ANF
180	85	S	GENETIC SYSTEMS	A	MAB
181	85	S	T CELL SCIENCES	E	
182	85	V	MOLECULON	J	VET DRUG DELIV
183	85	V	MONOCLONAL ANTIBODIES	J	VET DIAGNOSTICS
184	85	V	NEOGEN	J	VETERINARY
185	85	VQ	CAMBRIDGE BIOSCIENCE	L	VET VACCINE
186	85	VQ	CETUS	J	VET VACCINE
187	85	VQ	GENEX	J	CHICKEN VACCINE
188	86	B	AGRI-DIAGNOSTICS ASSOCIATES	M	PLANT DIAGNOSTI
189	86	B	BIOTECHNICA INTERNATIONAL	R	RHIZOBIA BACT.
190	86	B	DNA PLANT TECHNOLOGY	J	PLANT VARIETIES
191	86	B	ECOGEN	RE	INSECTICIDE
192	86	E	SEPRACOR	J	MRMBRANE TECH
193	86	F	CAMBRIDGE RESEARCH BIOCHEM	E	
194	86	F	CETUS	J	INSTRUMT SYSTMS
195	86	F	CHARLES RIVER BIOTECH SERVIC	A	
196	86	F	GENENTECH	L	
197	86	F	GENETIC DESIGN	A	DNA SYNTHESIZER
198	86	F	INTELLIGENETICS	A	SOFTWARE
199	86	F	VEGA BIOTECHNOLOGIES	EM	SYNTHESIZERS
200	86	F	VEGA BIOTECHNOLOGIES	AJ	DNA SNTHESIZERS
201	86	G	T CELL SCIENCES	M	MONO ANTIEDS
202	86	H	ENDOTRONICS	E	T-CELL THERAPY
203	86	I	ADVANCED GENETIC SCIENCES	R	
204	86	JO	AMGEN	JM	CHEMICALS
			BECKON DICKINSON		
			WARNER-LAMBERT		
			ELI LILLY		
			KRAFT		
			GENERAL FOODS		
			HERSHEY		
			NATIONAL DISTILLERS AND CHEM		
			ORTHO		
			ELI LILLY		
			SCHERING PLOUGH		
			ELI LILLY		
			BRISTOL-MYERS		
			MILES LABS		
			MONSANTO		
			CUTTER BIOLOGICALS		
			COOPERVISION		
			EASTMAN KODAK		
			ANNHEUSER-BUSCH		
			AMERICAN HOME PRODUCTS		
			GILLETTE		
			LUBRIZOL		
			JOHNSON & JOHNSON		
			BAXTER TRAVENOL		
			MEAD JOHNSON		
			EASTMAN KODAK		
			AMERICAN HOME PRODUCTS		
			BRISTOL-MYERS		
			SYNTEX		
			UPJOHN		
			RALSTON PURINA		
			SQUIBB		
			PHILLIPS PETROLEUM		
			TECHAMERICA		
			AH ROBBINS		
			O.M. SCOTT & SONS		
			UNIROYAL		
			DUPONT		
			AMERICAN CYANAMID		
			AMERICAN CYANAMID		
			MILLIGEN		
			PERKIN ELMER		
			CORNING GLASS WORKS		
			NEW BRUNSWICK SCIENTIFIC		
			MILLIPORE		
			AMOCO		
			DUPONT		
			DUPONT		
			BOEHRINGER MANNHEIM BIOCHEM.		
			CELANESE		
			DUPONT		
			EASTMAN KODAK		

NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
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SORTED BY INDUSTRY CLASSIFICATION
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#	YEAR	CLASS	COMPANY 1	COMPANY 2	ACTION	PRODUCT
205	86	K	AGEN USA	AMERICAN HOSPITAL SUPPLY	M	BLOOD SCREEN KT
206	86	K	CETUS	EASTMAN KODAK	J	AIDS DIAG
207	86	K	CETUS	EASTMAN KODAK	J	DIAGNOSTICS
208	86	K	ELECTRO-NUCLEONICS	PRUTECH R AND D PARTNERSHIP	R	AIDS TEST
209	86	K	GENPROBE	FISHER SCIENTIFIC	M	MYCOPLASMA KIT
210	86	K	MONOCLONAL ANTIBODIES	ALCON LABORATORIES	J	
211	86	K	VENTREX	BAXTER TRAVENOL DIAGNOSTICS	R	DX REAGENTS
212	86	KP	CYTOGEN	EASTMAN KODAK	R	
213	86	KP	CYTOGEN	EASTMAN KODAK	E	
214	86	KP	IMMUNOMEDICS	JOHNSON & JOHNSON	R	
215	86	KP	NEORX	EASTMAN KODAK	EJ	
216	86	M	COLLABORATIVE RESEARCH	DOW CHEMICAL	P	RENNIN
217	86	M	DNA PLANT TECHNOLOGY	NUTRASWEET CO	R	SWEETENERS
218	86	M	DNA PLANT TECHNOLOGY	MONSANTO	J	SWEETENERS
219	86	M	ENGENICS	EASTMAN KODAK	J	BIOCHEMICALS
220	86	M	INGENE	BEATRICE FOODS	R	SWEETENER
221	86	M	NUTRISEARCH CO	EASTMAN KODAK	J	FOOD INGREDIENT
222	86	MK	INTEGRATED GENETICS	AMOCO	J	FOOD DIAGNOSTIC
223	86	O	GENENTECH	CORNING GLASS	J	
224	86	OJ	ADVANCED GENETIC SCIENCES	EASTMAN KODAK	J	SNOWMAX
225	86	P	AMGEN	JOHNSON & JOHNSON	J	IL-2 ANALOG
226	86	P	AMGEN	SMITHKLINE	EJ	SOMATOTROPIN
227	86	P	BIO-TECHNOLOGY GENERAL	BAXTER TRAVENOL	M	GROWTH HORMONE
228	86	P	BIO-TECHNOLOGY GENERAL	BRISTOL-MYERS	LM	SOD
229	86	P	BIOGEN	BAXTER TRAVENOL	L	G-INTERFERON
230	86	P	CALIFORNIA BIOTECHNOLOGY	WYETH	M	RENIN INHBITORS
231	86	P	CALIFORNIA BIOTECHNOLOGY	AMERICAN HOME PRODUCTS	M	NAZDEL
232	86	P	CALIFORNIA BIOTECHNOLOGY	ORTHO	R	NAZDEL
233	86	P	CENTOCOR	FMC	E	
234	86	P	CISTRON TECHNOLOGY	DUPONT	L	IL-2
235	86	P	DIAGNOSTIC INC	COOPERVISION	M	HYALURONIC ACID
236	86	P	ENDOTRONICS	CELANESE	E	HEPATITIS B VIR
237	86	P	ENDOTRONICS	CELANESE	R	AIDS TREATMENT
238	86	P	GENEX	SCHERING-PLOUGH	R	PLASMA PROTEIN
239	86	P	HEPAR INDUSTRIES	AMERICAN HOME PRODUCTS	L	HEPARIN
240	86	P	IMMUNEX	EASTMAN KODAK	J	LYMPHOKINE PROD
241	86	P	INTERFERON SCIENCES	ANNHEUSER-BUSCH	E	IF
242	86	P	INVITRON	SEARLE	J	
243	86	P	MEDI-CONTROL CORP	BIOTECHNOLOGY DEV CORP	E	DRUG DELIVERY
244	86	P	MELOY LABORATORIES	RORER GROUP	A	
245	86	P	MOLECULON	BRISTOL-MYERS	J	DRUG DELIV
246	86	P	NOVA PHARMACEUTICALS	CELANESE	E	
247	86	P	NOVACEL	CELANESE	J	
248	86	P	SYNERGEN	PROCTER AND GAMBLE	J	COLLAGENASE INH
249	86	P	TRITON BIOSCIENCES	CETUS	J	INTERFERON
250	86	PK	APPLIED BIOTECHNOLOGY	DUPONT	J	CANCER DX, THERA
251	86	PK	T CELL SCIENCES	PFIZER	R	ARTHRITIS DRUG
252	86	Q	CODON	SMITHKLINE	M	SWINE VACCINES
253	86	S	GENETICS INSTITUTE	INTERNATIONAL PAPER	J	
254	86	V	CALIFORNIA BIOTECHNOLOGY	AMERICAN HOME PRODUCTS	J	PET VACCINES
255	86	V	CAMBRIDGE BIOSCIENCE	SMITHKLINE	M	FELINE LEUK KIT

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#	YEAR	CLASS	COMPANY 1	COMPANY 2	ACTION	PRODUCT
256	86	V	MOLECULAR GENETICS	EASTMAN KODAK	J	
257	86	V	SYNBIOTICS	INTERNATIONAL MINERALS AND C	J	DIAGNOSTICS
258	86	VA	SYNBIOTICS	PRUTECH R AND D PARTNERSHIP	R	VACCINES, ETC.
259	86	WP	ENDOTRONICS	CELANESE	R	IMMUNE CELLS
260	86	WP	ONCOGENE SCIENCE	PFIZER	EJ	ONCOGENES, GF'S
261	86	Y	GEN-PROBE	FISCHER SCIENTIFIC	M	MYCOPLASMA KITS

DATA FOR TABLE VI
NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
FOREIGN CORPORATIONS AND U.S. BIOTECHNOLOGY COMPANIES
JOINT VENTURES SORTED BY INDUSTRY CLASS
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#	CLASS	US BT COMPANY	FOREIGN CORPORATION	COUNTRY	YEAR	ACTION
1	A	XENOGEN	mitsui toatsu	JAPAN	83	J
2	B	AGRI-DIAGNOSTICS	CIBA-GEIGY	SWITZ	86	J
3	B	AGRIGENETICS	HOFFMANN-LA ROCHE	SWISS	82	EJ
4	B	CALGENE	KURARAY	JAPAN	85	J
5	B	CALGENE	RHONE-POULENC AGROCHIMIE	FRANCE	84	J
6	B	CALGENE	NESTLE	SWISS	85	J
7	B	INT'L PLANT RESEARCH INST	SIME DARBY BERHAD	MALAYSIA	82	J
8	B	NPI	SUMITOMO	JAPAN	84	J
9	B	PLANT GENETICS	KIRIN BREWERY	JAPAN	84	JE
10	B	PRUTEC	DJ VAN DER HAVE BV	NETH.	86	J
11	EP	DAMON BIOTECH	HOFFMANN-LA ROCHE	SWISS	82	J
12	G	BIOTECH RESEARCH LABS	FUJIZOKI	JAPAN	82	EJ
13	G	GENEX	PHARMACIA	SWEDEN	85	J
14	GF	APPLIED BIOSYSTEMS	JAPAN SCIENTIFIC INSTRUMENT	JAPAN	85	J
15	H	HYBRITECH	TEIJIN	JAPAN	82	J
16	J	BIOSEARCH	BIOSYNTECH BIOCHEMISCHE..	WGER	85	MJ
17	J	CHIRON	GIST-BROCADES	NETH	84	J
18	J	GENZYME	NAGASE & CO.	JAPAN	86	J
19	JG	CHIRON	THE PETROFINA GROUP	BELGIUM	86	J
20	JX	ENZO	KINTO	JAPAN	81	J
21	K	CENTOCOR	TORAY INDUSTRIES	JAPAN	83	JL
22	K	ENDOTRONICS	SINO AMERICAN BIOTECHNOLOGY	CHINA	86	J
23	K	GENETIC DIAGNOSTICS	HOFFMANN-LA ROCHE	SWISS	85	JR
24	K	HANA BIOLOGICS	FUJIZOKI	JAPAN	82	EJ
25	K	HANA BIOLOGICS	RECORDATI	ITALY	82	JE
26	K	HYBRITECH	TOYO SODA	JAPAN	84	JM
27	K	INTEGRATED GENETICS	FUJIREBO	JAPAN	84	J
28	K	UNIGENE LABORATORIES	SIGMA-TAU	ITALY	84	J
29	KP	HUMAN ANTIBODY TECHNOLOGIES	KYOWA HAKKO	JAPAN	84	J
30	M	INGENE	mitsubishi	JAPAN	86	J
31	OP	GENENTECH	BOEHRINGER INGELHEIM	WGER	85	EJ
32	P	AMGEN	KIRIN BREWERY	JAPAN	84	J
33	P	BIOGEN	TEIJIN	JAPAN	82	JM
34	P	BIOGEN	FUJISAWA	JAPAN	82	J
35	P	BIOGEN	SUNTORY	JAPAN	83	J
36	P	BIOGEN	MEIJI SEIKA	JAPAN	82	J
37	P	BIOGEN	SHIONOGI	JAPAN	82	J
38	P	BIOGEN	SHAANXI PHARMACEUTICAL BUREA	CHINA	83	J
39	P	BIOGEN	BASF	WGER	85	J
40	P	BIOGEN	YAMANOUCHI PHARMACEUTICAL	JAPAN	82	J
41	P	CHIRON	PHARMACIA	SWEDEN	85	J
42	P	CREATIVE BIOMOLECULES	MENARINI	ITALY	85	J
43	P	CYTOGEN	FARMITALIA CARLA ARBA SPA	IT	85	J
44	P	ENDOTRONICS	NIPPON CHEMICAL INDUSTRIAL C	JAPAN	86	J
45	P	GENENTECH	SPEYWOOD LABORATORIES	UK	82	J
46	P	GENENTECH	mitsubishi chemical	JAPAN	82	J
47	P	GENENTECH	HOFFMANN-LA ROCHE	SWISS	81	J
48	P	GENENTECH	mitsubishi	JAPAN	83	J
49	P	GENENTECH	GRUENENTHAL GMBH	W GER	82	J
50	P	GENETICS INSTITUTE	SANDOZ	SWISS	84	J
51	P	GENETICS INSTITUTE	CHUGAI PHARMACEUTICALS	JAPAN	84	JM
52	P	GENEX	mitsui toatsu	JAPAN	82	J

NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
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JOINT VENTURES SORTED BY INDUSTRY CLASS
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#	CLASS	US BT COMPANY	FOREIGN CORPORATION	COUNTRY	YEAR	ACTION
53	P	GENEX	BEHRINGWERKE	WGER	84	J
54	P	GENEX	MONTEDISON	ITALY	84	J
55	P	GENEX	YOSHITOMI PHARM INDUST.	JAPAN	83	J
56	P	GENEX	SCHERING AG	WGER	82	J
57	P	GENEX	YAMANOUCHI PHARMACEUTICAL	JAPAN	82	J
58	P	GENEX	GREEN CROSS	JAPAN	82	J
59	P	HYBRITECH	GREEN CROSS	JAPAN	82	J
60	P	IMMUNEX	BEHRINGWERKE	WGER	84	J
61	P	IMMUNEX	HOFFMANN-LA ROCHE	SWISS	86	J
62	P	IMRE	PHARMACIA	SWED	84	J
63	P	INTEGRATED GENETICS	TOYOBO	JAPAN	83	JM
64	P	INTEGRATED GENETICS	BASF	WGER	85	J
65	P	INTERFERON SCIENCES	GREEN CROSS	JAPAN	82	J
66	P	SYNERGEN	CIBA-GEIGY	SWISS	86	J
67	P	UNIGENE LABORATORIES	ERBAMONT	ITALY	85	J
68	P	VIVOTECH	CANADIAN ASTRONAUTICS LTD	CANADA	86	J
69	P	ZYMOGENETICS	TEIJIN LTD	JAPAN	86	J
70	PQ	CHIRON	CIBA-GEIGY	SWITZ	86	J
71	Q	BIOGEN	GREEN CROSS	JAPAN	81	J
72	Q	BIOGEN	WELLCOME BIOTECHNOLOGY	UK	84	JM
73	Q	CHIRON	CIBA-GEIGY	SWITZ.	86	J
74	S	BATELLE DEVELOPMENT	MITSUBISHI	JAPAN	84	J
75	S	FLOW LABORATORIES	CONTACT-HOLDING	NETH	83	J
76	S	GENENTECH	MANY JAPANESE COMPANIES	JAPAN	82	J
77	S	GENETICS INSTITUTE	GIST-BROCADES	NETH	86	J
78	V	NEOGEN	SOLVAY	BELGIUM	86	J
79	W	GENENTECH	BOEHRINGER INGELHEIM	WGER	85	J
80	W	UNIGENE LABORATORIES	CIBA-GEIGY	SWISS	85	RJ
81	X	BIOGEN	SUMITOMO	JAPAN	85	J

DATA FOR TABLE VI
NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
FOREIGN CORPORATIONS AND U.S. BIOTECHNOLOGY COMPANIES
LICENSING AGREEMENTS SORTED BY INDUSTRY CLASS
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#	CLASS	US BT COMPANY	FOREIGN CORPORATION	COUNTRY	YEAR	ACTION
1	G	BIOGEN	CIBA-GEIGY	SWISS	85	L
2	H	QUEUE SYSTEMS	SHIN MEIWA INDUSTRY	JAPAN	84	ML
3	K	CENTOCOR	TORAY INDUSTRIES	JAPAN	83	JL
4	K	ENZO	MEIJI SEIKA	JAPAN	82	LM
5	K	HYBRITECH	MITSUBISHI	JAPAN	81	L
6	K	TECHNICLONE	FUJIZOKI	JAPAN	82	L
7	M	INNOVAX LABS	SHOW BRAND MILK	JAPAN	83	L
8	P	BIOGEN	SHIONOGI	JAPAN	83	L
9	P	COLLABORATIVE RESEARCH	GREEN CROSS	JAPAN	83	L
10	P	COLLABORATIVE RESEARCH	SANDOZ	SWISS	84	L
11	P	COLLAGEN	LEDERLE (JAPAN)	JAPAN	85	L
12	P	GENENTECH	DAIICHI SEIYAKU	JAPAN	83	L
13	P	IMMUNEX	HOFFMANN-LA ROCHE	SWISS	84	L
14	PO	GENENTECH	FUJISAWA	JAPAN	84	LM
15	Q	GENENTECH	MITSUBISHI	JAPAN	85	L
16	S	UNIVERSITY GENETICS	L'OREAL	FRANCE	86	L
17	V	GENENTECH	CIBA-GEIGY	SWISS	85	L
18	W	UNIGENE LABORATORIES	TOYO SODA	JAPAN	85	L
19	X	BIOGEN	KABIVITRUM	SWEDEN	84	LM

DATA FOR TABLE VI
 NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
 FOREIGN CORPORATIONS AND U.S. BIOTECHNOLOGY COMPANIES
 MARKETING AGREEMENTS SORTED BY INDUSTRY CLASS
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#	CLASS	US BT COMPANY	FOREIGN CORPORATION	COUNTRY	YEAR	ACTION
1	F	BIOREACTOR TECHNOLOGY	C. ITOH	JAPAN	86	M
2	F	ENDOTRONICS	MITSUI	JAPAN	84	M
3	G	MOLECULAR BIOSYSTEMS	FUNAKOSHI	JAPAN	84	M
4	G	VENTREX	FUNAKOSHI	JAPAN	84	M
5	H	BIOASSAY SYSTEMS	TORAY INDUSTRIES	JAPAN	82	M
6	H	QUEUE SYSTEMS	SHIN MEIWA INDUSTRY	JAPAN	84	ML
7	J	BIOSEARCH	BIOSYNTECH BIOCHEMISCHE..	WGER	85	MJ
8	K	DIAGNON	AMERSHAM INTERNATIONAL	UK	85	M
9	K	DIAGNOSTIC PRODUCTS	DAINIPPON INK & CHEMICAL	JAPAN	86	M
10	K	ELECTRO-NUCLEONICS	PHARMACIA	SWEDEN	86	M
11	K	ENZO	MEIJI SEIKA	JAPAN	82	LM
12	K	HYBRITECH	TOYO SODA	JAPAN	84	JM
13	K	NOVO BIOLABS USA	NOVO INDUSTRI A/S	DENMARK	86	M
14	K	SERONO LABS	DIAGNOSTICS PASTEUR	FRANCE	86	M
15	MJ	GENENCOR	CHRIS HANSEN'S LABORATORIUM	DENMARK	83	M
16	P	AMGEN	AMERSHAM INTERNATIONAL	UK	85	M
17	P	ATLANTIC ANTIBODIES	ORIENTAL YEAST	JAPAN	84	M
18	P	BIOGEN	TEIJIN	JAPAN	82	JM
19	P	CENTOCOR	INTERNATIONAL CIS	FRANCE	82	M
20	P	CENTOCOR	HOFFMANN-LA ROCHE	SWISS	84	M
21	P	COLLABORATIVE RESEARCH	GREEN CROSS	JAPAN	82	M
22	P	GENETICS INSTITUTE	WELLCOME	UK	85	M
23	P	GENETICS INSTITUTE	CHUGAI PHARMACEUTICALS	JAPAN	84	JM
24	P	INTEGRATED GENETICS	TOYOBO	JAPAN	83	JM
25	P	INTERFERON SCIENCES	GREEN CROSS	JAPAN	82	M
26	PO	GENENTECH	TORAY INDUSTRIES	JAPAN	81	MR
27	PO	GENENTECH	FUJISAWA	JAPAN	84	LM
28	Q	BIOGEN	WELLCOME BIOTECHNOLOGY	UK	84	JM
29	Q	BIOGEN	BEHRINGWERKE	W GER	86	M
30	S	REPLIGEN	C. ITOH	JAPAN	83	EM
31	S	UNIVERSITY GENETICS	NISSHO IWAI	JAPAN	83	M
32	V	MOLECULAR GENETICS	SHIONOGI	JAPAN	85	M
33	V	SYNBIOTICS	NORDEN-EUROPE	UK	86	M
34	X	BIOGEN	KABIVITRUM	SWEDEN	84	LM

DATA FOR TABLE VI
 NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
 FOREIGN CORPORATIONS AND U.S. BIOTECHNOLOGY COMPANIES
 RESEARCH CONTRACTS SORTED BY INDUSTRY CLASS
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#	CLASS	US BT COMPANY	FOREIGN CORPORATION	COUNTRY	YEAR	ACTION
1	B	BIOTECHNICA INTERNATIONAL	ENICHEM AGRICOLTURA SPA	ITALY	86	R
2	B	BIOTECHNICA INTERNATIONAL	SEAGRAMS	CANADA	84	RE
3	B	CALGENE	KEMIRA	JAPAN	85	R
4	B	INT'L PLANT RESEARCH INST.	CLAEYS-LUCK	FRANCE	81	R
5	E	UNIGENE LABORATORIES	HOFFMANN-LA ROCHE	SWISS	84	RC
6	G	VEGA BIOTECHNOLOGIES	HOFFMANN-LA ROCHE	SWISS	84	RC
7	K	GENETIC DIAGNOSTICS	HOFFMANN-LA ROCHE	SWISS	85	JR
8	KP	MONOTECH LABS	EKEN	JAPAN	82	R
9	P	CALIFORNIA BIOTECHNOLOGY	HOFFMANN-LA ROCHE	SWISS	86	RC
10	P	GENENTECH	KABIVITRUM	SWEDEN	85	R
11	P	GENEX	FORTIA AB	SWEDEN	82	R
12	P	GENEX	BEHRINGWERKE	WGER	86	R
13	P	LIPOSOME TECHNOLOGY	TAKEDA	JAPAN	86	R
14	P	TECHNICLONE	HOFFMANN-LA ROCHE	SWISS	83	RC
15	PM	ZYMOS	NOVO INDUSTRI	DENMARK	82	ER
16	PO	GENENTECH	TORAY INDUSTRIES	JAPAN	81	MR
17	W	GENEX	WELLCOME RESEARCH LABS	UK	85	R
18	W	UNIGENE LABORATORIES	CIBA-GEIGY	SWISS	85	RJ

DATA FOR TABLE VII
 NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
 FOREIGN CORPORATIONS AND U.S. BIOTECHNOLOGY COMPANIES
 ALL JOINT AGREEMENTS SORTED BY INDUSTRY CLASS
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#	YEAR	FOREIGN CORPORATION	COUNTRY	ACTION
CLASS	US BT COMPANY			
1	86	BIOSTAR MEDICAL PRODUCTS	SKANDIGEN AB	SWEDEN E
2	86	ELECTRO-NUCLEONICS	PHARMACIA	SWEDEN E
3	A 83	XENOGEN	mitsui toatsu	JAPAN J
4	B 81	INT'L PLANT RESEARCH INST.	CLAEYS-LUCK	FRANCE R
5	B 82	AGRIGENETICS	HOFFMANN-LA ROCHE	SWISS EJ
6	B 82	INT'L PLANT RESEARCH INST	SIME DARBY BERHAD	MALAYSIA J
7	B 83	ZOECON	SANDOZ	SWITZ. A
8	B 84	BIOTECHNICA INTERNATIONAL	SEAGRAMS	CANADA RE
9	B 84	CALGENE	RHONE-POULENC AGROCHIMIE	FRANCE J
10	B 84	NPI	SUMITOMO	JAPAN J
11	B 84	PLANT GENETICS	KIRIN BREWERY	JAPAN JE
12	B 85	CALGENE	KURARAY	JAPAN J
13	B 85	CALGENE	NESTLE	SWISS J
14	B 85	CALGENE	KEMIRA	JAPAN R
15	B 86	AGRI-DIAGNOSTICS	CIBA-GEIGY	SWITZ J
16	B 86	BIOTECHNICA INTERNATIONAL	ENICHEM AGRICOLTURA SPA	ITALY R
17	B 86	PRUTEC	DJ VAN DER HAVE BV	NETH. J
18	E 84	UNIGENE LABORATORIES	HOFFMANN-LA ROCHE	SWISS RC
19	EP 82	DAMON BIOTECH	HOFFMANN-LA ROCHE	SWISS J
20	F 84	ENDOTRONICS	mitsui	JAPAN M
21	F 86	BIOREACTOR TECHNOLOGY	C. ITOH	JAPAN M
22	G 82	BIOTECH RESEARCH LABS	FUJIZOKI	JAPAN EJ
23	G 82	P-L BIOCHEMICALS	PHARMACIA	SWED A
24	G 84	MOLECULAR BIOSYSTEMS	FUNAKOSHI	JAPAN M
25	G 84	VEGA BIOTECHNOLOGIES	HOFFMANN-LA ROCHE	SWISS RC
26	G 84	VENTREX	FUNAKOSHI	JAPAN M
27	G 85	BIOGEN	CIBA-GEIGY	SWISS L
28	G 85	GENEX	PHARMACIA	SWEDEN J
29	GF 85	APPLIED BIOSYSTEMS	JAPAN SCIENTIFIC INSTRUMENT	JAPAN J
30	H 82	BIOASSAY SYSTEMS	TORAY INDUSTRIES	JAPAN M
31	H 82	HYBRITECH	TEIJIN	JAPAN J
32	H 84	QUEUE SYSTEMS	SHIN MEIWA INDUSTRY	JAPAN ML
33	HE 84	DAMON BIOTECH	HOFFMANN-LA ROCHE	SWISS O
34	HJ 85	PURIFICATION ENGINEERING	RHONE-POULENC AGROCHIMIE	FRANCE A
35	J 84	CHIRON	GIST-BROCADES	NETH J
36	J 85	BIO-TECHNOLOGY GENERAL	PHARMACIA	SWE E
37	J 85	BIOSEARCH	BIOSYNTECH BIOCHEMISCHE..	WGER MJ
38	J 86	GENZYME	NAGASE & CO.	JAPAN J
39	JG 86	CHIRON	THE PETROFINA GROUP	BELGIUM J
40	JX 81	ENZO	KINTO	JAPAN J
41	K 81	HYBRITECH	mitsubishi	JAPAN L
42	K 82	BIOMEDICAL RESEARCH LABS	HOFFMANN-LA ROCHE	SWISS A
43	K 82	ENZO	MEIJI SEIKA	JAPAN LM
44	K 82	HANA BIOLOGICS	RECORDATI	ITALY JE
45	K 82	HANA BIOLOGICS	FUJIZOKI	JAPAN EJ
46	K 82	TECHNICLONE	FUJIZOKI	JAPAN L
47	K 83	CENTOCOR	TORAY INDUSTRIES	JAPAN JL
48	K 84	AMERICAN DIAGNOSTICS	HOFFMANN-LA ROCHE	SWISS A
49	K 84	BIO-RESPONSE	CIBA-GEIGY	SWISS O
50	K 84	HYBRITECH	TOYO SODA	JAPAN JM

NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
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ALL JOINT AGREEMENTS SORTED BY INDUSTRY CLASS
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#	YEAR	FOREIGN CORPORATION	COUNTRY	ACTION
CLASS	US BT COMPANY			
51	K 84 INTEGRATED GENETICS	FUJIREBO	JAPAN	J
52	K 84 LIFE TECHNOLOGIES	UNILEVER	UK	O
53	K 84 UNIGENE LABORATORIES	SIGMA-TAU	ITALY	J
54	K 85 DIAGNON	AMERSHAM INTERNATIONAL	UK	M
55	K 85 GENETIC DIAGNOSTICS	HOFFMANN-LA ROCHE	SWISS	JR
56	K 86 DAMON BIOTECH	ARES-SERONO	NETHERLAND	O
57	K 86 DIAGNOSTIC PRODUCTS	DAINIPPON INK & CHEMICAL	JAPAN	M
58	K 86 ELECTRO-NUCLEONICS	PHARMACIA	SWEDEN	M
59	K 86 ENDOTRONICS	SINO AMERICAN BIOTECHNOLOGY	CHINA	J
60	K 86 NOVO BIOLABS USA	NOVO INDUSTRI A/S	DENMARK	M
61	K 86 SERONO LABS	DIAGNOSTICS PASTEUR	FRANCE	M
62	KP 82 MONOTECH LABS	EKEN	JAPAN	R
63	KP 84 HUMAN ANTIBODY TECHNOLOGIES	KYOWA HAKKO	JAPAN	J
64	M 83 INNOVAX LABS	SHOW BRAND MILK	JAPAN	L
65	M 86 INGENE	MITSUBISHI	JAPAN	J
66	MJ 83 GENENCOR	CHRIS HANSEN'S LABORATORIUM	DENMARK	M
67	OP 85 GENENTECH	BOEHRINGER INGELHEIM	WGER	EJ
68	P 81 COLLABORATIVE RESEARCH	GREEN CROSS	JAPAN	E
69	P 81 GENENTECH	HOFFMANN-LA ROCHE	SWISS	J
70	P 82 BIOGEN	YAMANOUCHI PHARMACEUTICAL	JAPAN	J
71	P 82 BIOGEN	SHIONOGI	JAPAN	J
72	P 82 BIOGEN	MEIJI SEIKA	JAPAN	J
73	P 82 BIOGEN	FUJISAWA	JAPAN	J
74	P 82 BIOGEN	TEIJIN	JAPAN	JM
75	P 82 CENTOCOR	INTERNATIONAL CIS	FRANCE	M
76	P 82 COLLABORATIVE RESEARCH	GREEN CROSS	JAPAN	M
77	P 82 GENENTECH	MITSUBISHI CHEMICAL	JAPAN	J
78	P 82 GENENTECH	TAKEDA	JAPAN	O
79	P 82 GENENTECH	GRUENENTHAL GMBH	W GER	J
80	P 82 GENENTECH	SPEYWOOD LABORATORIES	UK	J
81	P 82 GENEX	MTSUI TOATSU	JAPAN	J
82	P 82 GENEX	FORTIA AB	SWEDEN	R
83	P 82 GENEX	SCHERING AG	WGER	J
84	P 82 GENEX	YAMANOUCHI PHARMACEUTICAL	JAPAN	J
85	P 82 GENEX	GREEN CROSS	JAPAN	J
86	P 82 HYBRITECH	GREEN CROSS	JAPAN	J
87	P 82 INTERFERON SCIENCES	GREEN CROSS	JAPAN	M
88	P 82 INTERFERON SCIENCES	GREEN CROSS	JAPAN	J
89	P 83 BIOGEN	SHIONOGI	JAPAN	L
90	P 83 BIOGEN	SHAANXI PHARMACEUTICAL BUREA	CHINA	J
91	P 83 BIOGEN	SUNTORY	JAPAN	J
92	P 83 COLLABORATIVE RESEARCH	GREEN CROSS	JAPAN	L
93	P 83 GENENTECH	DAIICHI SEIYAKU	JAPAN	L
94	P 83 GENENTECH	MITSUBISHI	JAPAN	J
95	P 83 GENEX	YOSHITOMI PHARM INDUST.	JAPAN	J
96	P 83 INTEGRATED GENETICS	TOYOBO	JAPAN	JM
97	P 83 TECHNICLONE	HOFFMANN-LA ROCHE	SWISS	RC
98	P 84 AMGEN	KIRIN BREWERY	JAPAN	J
99	P 84 ATLANTIC ANTIBODIES	ORIENTAL YEAST	JAPAN	M
100	P 84 CENTOCOR	HOFFMANN-LA ROCHE	SWISS	M

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#	YEAR	CLASS	US BT COMPANY	FOREIGN CORPORATION	COUNTRY	ACTION
101	P	84	COLLABORATIVE RESEARCH	SANDOZ	SWISS	L
102	P	84	GENETICS INSTITUTE	SANDOZ	SWISS	J
103	P	84	GENETICS INSTITUTE	CHUGAI PHARMACEUTICALS	JAPAN	JM
104	P	84	GENEX	MONTEDISON	ITALY	J
105	P	84	GENEX	BEHRINGWERKE	WGER	J
106	P	84	IMMUNEX	HOFFMANN-LA ROCHE	SWISS	L
107	P	84	IMMUNEX	BEHRINGWERKE	WGER	J
108	P	84	IMRE	PHARMACIA	SWED	J
109	P	84	LYMPHOMED	FUJISAWA	JAPAN	W
110	P	85	AMGEN	AMERSHAM INTERNATIOAL	UK	M
111	P	85	BIOGEN	BASF	WGER	J
112	P	85	CHIRON	PHARMACIA	SWEDEN	J
113	P	85	COLLAGEN	LEDERLE (JAPAN)	JAPAN	L
114	P	85	CREATIVE BIOMOLECULES	MENARINI	ITALY	J
115	P	85	CYTOGEN	FARMITALIA CARLA ARBA SPA	IT	J
116	P	85	GENENTECH	KABIVITRUM	SWEDEN	R
117	P	85	GENETICS INSTITUTE	WELLCOME	UK	M
118	P	85	INTEGRATED GENETICS	BASF	WGER	J
119	P	85	UNIGENE LABORATORIES	ERBAMONT	ITALY	J
120	P	86	AMGEN	AB FERMENTA	SWEDEN	E
121	P	86	CALIFORNIA BIOTECHNOLOGY	HOFFMANN-LA ROCHE	SWISS	RC
122	P	86	ENDOTRONICS	NIPPON CHEMICAL INDUSTRIAL C	JAPAN	J
123	P	86	GENEX	BEHRINGWERKE	WGER	R
124	P	86	IMMUNEX	HOFFMANN-LA ROCHE	SWISS	J
125	P	86	LIPOSOME TECHNOLOGY	TAKEDA	JAPAN	R
126	P	86	SYNERGEN	CIBA-GEIGY	SWISS	J
127	P	86	VIVOTECH	CANADIAN ASTRONAUTICS LTD	CANADA	J
128	P	86	ZYMOGENETICS	TEIJIN LTD	JAPAN	J
129	PM	82	ZYMOS	NOVO INDUSTRI	DENMARK	ER
130	PO	81	GENENTECH	TORAY INDUSTRIES	JAPAN	MR
131	PO	84	GENENTECH	FUJISAWA	JAPAN	LM
132	PQ	86	CHIRON	CIBA-GEIGY	SWITZ	J
133	Q	81	BIOGEN	GREEN CROSS	JAPAN	J
134	Q	84	BIOGEN	WELLCOME BIOTECHNOLOGY	UK	JM
135	Q	85	GENENTECH	MITSUBISHI	JAPAN	L
136	Q	86	BIOGEN	BEHRINGWERKE	W GER	M
137	Q	86	CHIRON	CIBA-GEIGY	SWITZ.	J
138	S	82	GENENTECH	MANY JAPANESE COMPANIES	JAPAN	J
139	S	82	MOLECULAR DIAGNOSTICS	BAYER	WGER	E
140	S	83	FLOW LABORATORIES	CONTACT-HOLDING	NETH	J
141	S	83	REPLIGEN	C. ITOH	JAPAN	EM
142	S	83	UNIVERSITY GENETICS	NISSHO IWAI	JAPAN	M
143	S	84	BATELLE DEVELOPMENT	MITSUBISHI	JAPAN	J
144	S	86	CYANOTECH	DAIKYO OIL COMPANY	JAPAN	E
145	S	86	GENETICS INSTITUTE	GIST-BROCADES	NETH	J
146	S	86	UNIVERSITY GENETICS	L'OREAL	FRANCE	L
147	V	85	GENENTECH	CIBA-GEIGY	SWISS	L
148	V	85	MOLECULAR GENETICS	SHIONOGI	JAPAN	M
149	V	86	NEOGEN	SOLVAY	BELGIUM	J
150	V	86	SYNBIOTICS	NORDEN-EUROPE	UK	M

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#	YEAR		FOREIGN CORPORATION		
	CLASS	US BT COMPANY		COUNTRY	ACTION
151	W	85 GENENTECH	BOEHRINGER INGELHEIM	WGER	J
152	W	85 GENEX	WELLCOME RESEARCH LABS	UK	R
153	W	85 UNIGENE LABORATORIES	CIBA-GEIGY	SWISS	RJ
154	W	85 UNIGENE LABORATORIES	TOYO SODA	JAPAN	L
155	X	84 BIOGEN	KABIVITRUM	SWEDEN	LM
156	X	85 BIOGEN	SUMITOMO	JAPAN	J
157	X	85 CETUS	SCHERING AG	W GER	C

Special Appendix: Countries of Origin of Foreign Partners
 NORTH CAROLINA BIOTECHNOLOGY CENTER ACTIONS DATABASE
 FOREIGN TECHNOLOGY TRANSFER
 FOREIGN CORPORATIONS AND U.S. BT COMPANIES
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YEAR	CLASS	COMPANY 1	COUNTRY	COMPANY 2	COUNTRY 2	ACTION	PRODUCT
1	86 V	NEOGEN	US	SOLVAY	BELGIUM	J	DIAGNOSTICS
2	86 JG	CHIRON	US	THE PETROFINA GROUP	BELGIUM	J	INDSTRIAL ENZYM
3	86 P	VIVOTECH	US	CANADIAN ASTRONAUTIC	CANADA	J	IMPLANTS
4	84 B	BIOTECHNICA INTERNAT	US	SEAGRAMS	CANADA	RE	MANY
5	83 P	BIOGEN	US	SHAANXI PHARMACEUTIC	CHINA	J	GAMMA IF
6	86 K	ENDOTRONICS	US	SINO AMERICAN BIOTEC	CHINA	J	MAB DIAGNOSTICS
7	83 MJ	GENENCOR	US	CHRIS HANSEN'S LABOR	DENMARK	M	RENNIN
8	82 PM	ZYMOS	US	NOVO INDUSTRI	DENMARK	ER	YEAST PRODUCTS
9	86 K	NOVO BIOLABS USA	US	NOVO INDUSTRI A/S	DENMARK	M	DIAGNOSTICS
10	86 P	ZYMOGENETICS	US	NOVO INDUSTRI A/S	DENMARK		FACTOR VII
11	81 B	INT'L PLANT RESEARCH	US	CLAEYS-LUCK	FRANCE	R	PLANTS
12	86 K	SERONO LABS	US	DIAGNOSTICS PASTEUR	FRANCE	M	TEST KITS
13	82 P	CENTOCOR	US	INTERNATIONAL CIS	FRANCE	M	MAB'S
14	86 S	UNIVERSITY GENETICS	US	L'OREAL	FRANCE	L	TGF
15	84 B	CALGENE	US	RHONE-POULENC AGROCH	FRANCE	J	SUNFLOWERS
16	85 HJ	PURIFICATION ENGINEE	US	RHONE-POULENC AGROCH	FRANCE	A	CHEMICALS
17	85 P	CYTOGEN	US	FARMITALIA CARLA ARB	IT	J	CA TREATMENT
18	86 B	BIOTECHNICA INTERNAT	US	ENICHEM AGRICOLTURA	ITALY	R	RHIZOBIA BACT.
19	85 P	UNIGENE LABORATORIES	US	ERBAMONT	ITALY	J	CALCITONIN
20	85 P	CREATIVE BIOMOLECULE	US	MENARINI	ITALY	J	TPA
21	84 P	GENEX	US	MONTEDISON	ITALY	J	STERIODS
22	82 K	HANA BIOLOGICS	US	RECORDATI	ITALY	JE	DIAGNOSTICS
23	84 K	UNIGENE LABORATORIES	US	SIGMA-TAU	ITALY	J	DIAGNOSTICS
24	86 F	BIOREACTOR TECHNOLOG	US	C. ITOH	JAPAN	M	BIOREACTOR
25	83 S	REPLIGEN	US	C. ITOH	JAPAN	EM	PROTEINS
26	84 P	GENETICS INSTITUTE	US	CHUGAI PHARMACEUTICA	JAPAN	JM	ERYTHROPOETIN
27	83 P	GENENTECH	US	DAIICHI SEIYAKU	JAPAN	L	GAMMA INTERFERN
28	86 S	CYANOTECH	US	DAIKYO OIL COMPANY	JAPAN	E	
29	86 K	DIAGNOSTIC PRODUCTS	US	DAINIPPON INK & CHEM	JAPAN	M	IMMUNODIAG.
30	82 KP	MONOTECH LABS	US	EKEN	JAPAN	R	DIAGNOSTICS
31	84 K	INTEGRATED GENETICS	US	FUJIREBO	JAPAN	J	DNA PROBE
32	82 P	BIOGEN	US	FUJISAWA	JAPAN	J	TPA
33	84 PO	GENENTECH	US	FUJISAWA	JAPAN	LM	LYMPHOTOXIN
34	84 P	LYMPHOMED	US	FUJISAWA	JAPAN	W	ANTI-PNEUMONIA
35	82 G	BIOTECH RESEARCH LAB	US	FUJIZOKI	JAPAN	EJ	MAB
36	82 K	HANA BIOLOGICS	US	FUJIZOKI	JAPAN	EJ	DIAGNOSTICS
37	82 K	TECHNICLONE	US	FUJIZOKI	JAPAN	L	DIAGNOSTIC
38	84 G	MOLECULAR BIOSYSTEMS	US	FUNAKOSHI	JAPAN	M	MICROSPHERES
39	84 G	VENTREX	US	FUNAKOSHI	JAPAN	M	MAB
40	81 Q	BIOGEN	US	GREEN CROSS	JAPAN	J	VACCINE
41	81 P	COLLABORATIVE RESEAR	US	GREEN CROSS	JAPAN	E	UROKINASE
42	83 P	COLLABORATIVE RESEAR	US	GREEN CROSS	JAPAN	L	INTERFERON
43	82 P	COLLABORATIVE RESEAR	US	GREEN CROSS	JAPAN	M	B-INTERFERON
44	82 P	GENEX	US	GREEN CROSS	JAPAN	J	HSA
45	82 P	HYBRITECH	US	GREEN CROSS	JAPAN	J	IMMUNOGLOBULINS
46	82 P	INTERFERON SCIENCES	US	GREEN CROSS	JAPAN	J	INTERFERONS
47	82 P	INTERFERON SCIENCES	US	GREEN CROSS	JAPAN	M	G-INTERFERON
48	85 GF	APPLIED BIOSYSTEMS	US	JAPAN SCIENTIFIC INS	JAPAN	J	REAGENTS

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YEAR	CLASS	COMPANY 1	COUNTRY	COMPANY 2	COUNTRY 2	ACTION	PRODUCT
49	85	B CALGENE	US	KEMIRA	JAPAN	R	HERBECIDE TOLER
50	81	JX ENZO	US	KINTO	JAPAN	J	ENZYMES
51	84	P AMGEN	US	KIRIN BREWERY	JAPAN	J	ERYTHROPOIETIN
52	84	B PLANT GENETICS	US	KIRIN BREWERY	JAPAN	JE	SEED
53	85	B CALGENE	US	KURARAY	JAPAN	J	AGCHEMS
54	84	KP HUMAN ANTIBODY TECHN	US	KYOWA HAKKO	JAPAN	J	DIAGNOSTIC
55	85	P COLLAGEN	US	LEDERLE (JAPAN)	JAPAN	L	IMPLANT
56	82	S GENENTECH	US	MANY JAPANESE COMPAN	JAPAN	J	MANY
57	82	P BIOGEN	US	MEIJI SEIKA	JAPAN	J	ANTIBIOTIC
58	82	K ENZO	US	MEIJI SEIKA	JAPAN	LM	HCG TEST
59	84	S BATELLE DEVELOPMENT	US	MITSUBISHI	JAPAN	J	
60	83	P GENENTECH	US	MITSUBISHI	JAPAN	J	TPA
61	85	Q GENENTECH	US	MITSUBISHI	JAPAN	L	VACCINE
62	81	K HYBRITECH	US	MITSUBISHI	JAPAN	L	ANTI IGE KIT
63	86	M INGENE	US	MITSUBISHI	JAPAN	J	SWEETENERS
64	82	P GENENTECH	US	MITSUBISHI CHEMICAL	JAPAN	J	TPA
65	84	F ENDOTRONICS	US	MITSUMI	JAPAN	M	INSTRUMENTATION
66	82	P GENEX	US	MITSUMI TOATSU	JAPAN	J	UROKINASE
67	83	A XENOGEN	US	MITSUMI TOATSU	JAPAN	J	FEED ADDITIVES
68	86	J GENZYME	US	NAGASE & CO.	JAPAN	J	AMYLASE
69	86	P ENDOTRONICS	US	NIPPON CHEMICAL INDU	JAPAN	J	HGH
70	83	S UNIVERSITY GENETICS	US	NISSHO IWAI	JAPAN	M	
71	84	P ATLANTIC ANTIBODIES	US	ORIENTAL YEAST	JAPAN	M	ANTISERA
72	84	H QUEUE SYSTEMS	US	SHIN MEIWA INDUSTRY	JAPAN	ML	BT PRODUCTS
73	82	P BIOGEN	US	SHIONOGI	JAPAN	J	HSA
74	83	P BIOGEN	US	SHIONOGI	JAPAN	L	IL-2
75	85	V MOLECULAR GENETICS	US	SHIONOGI	JAPAN	M	ANIMAL DRUGS
76	83	M INNOVAX LABS	US	SHOW BRAND MILK	JAPAN	L	
77	85	X BIOGEN	US	SUMITOMO	JAPAN	J	COLONY STIM FAC
78	84	B NPI	US	SUMITOMO	JAPAN	J	FOODS
79	83	P BIOGEN	US	SUNTORY	JAPAN	J	TNF
80	82	P GENENTECH	US	TAKEDA	JAPAN	O	B-INTERFERON
81	86	P LIPOSOME TECHNOLOGY	US	TAKEDA	JAPAN	R	
82	82	P BIOGEN	US	TEIJIN	JAPAN	JM	FACTOR VIII
83	82	H HYBRITECH	US	TEIJIN	JAPAN	J	MABS
84	86	P ZYMOGENETICS	US	TEIJIN LTD	JAPAN	J	BLOOD FACTORS
85	82	H BIOASSAY SYSTEMS	US	TORAY INDUSTRIES	JAPAN	M	BIOASSAY
86	83	K CENTOCOR	US	TORAY INDUSTRIES	JAPAN	JL	DIAGNOSTICS
87	81	PO GENENTECH	US	TORAY INDUSTRIES	JAPAN	MR	INTERFERON
88	84	K HYBRITECH	US	TOYO SODA	JAPAN	JM	DIAGNOSTIC
89	85	W UNIGENE LABORATORIES	US	TOYO SODA	JAPAN	L	IMMUNIZATION
90	83	P INTEGRATED GENETICS	US	TOYOBO	JAPAN	JM	TPA
91	82	P BIOGEN	US	YAMANOUCHI PHARMACEU	JAPAN	J	ANTI-INFLAMM.
92	82	P GENEX	US	YAMANOUCHI PHARMACEU	JAPAN	J	TPA
93	83	P GENEX	US	YOSHITOMI PHARM INDU	JAPAN	J	IL-2
94	82	B INT'L PLANT RESEARCH	US	SIME DARBY BERHAD	MALAYSIA	J	TROPICAL CROPS
95	83	S FLOW LABORATORIES	US	CONTACT-HOLDING	NETH	J	
96	84	J CHIRON	US	GIST-BROCADES	NETH	J	SOD

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YEAR	CLASS	COMPANY 1	COUNTRY	COMPANY 2	COUNTRY 2	ACTION	PRODUCT
97	86	S	GENETICS INSTITUTE	US GIST-BROCADES	NETH	J	
98	86	B	PRUTEC	US DJ VAN DER HAVE BV	NETH.	J	SEEDS
99	86	K	DAMON BIOTECH	US ARES-SERONO	NETHERLAND	O	DIAGNOSTIC MABS
100	85	J	BIO-TECHNOLOGY GENER	US PHARMACIA	SWE	E	HYALURONIC ACID
101	84	P	IMRE	US PHARMACIA	SWED	J	PROTEIN A
102	82	G	P-L BIOCHEMICALS	US PHARMACIA	SWED	A	BIOCHEMICALS
103	84	P	PHARMACIA DEVELOPMEN	US PHARMACIA	SWED		
104	86	P	AMGEN	US AB FERMENTA	SWEDEN	E	
105	82	P	GENEX	US FORTIA AB	SWEDEN	R	HYALURONIC ACID
106	84	X	BIOGEN	US KABIVITRUM	SWEDEN	LM	SOMATOMEDIN C
107	85	P	GENENTECH	US KABIVITRUM	SWEDEN	R	HGH
108	85	P	CHIRON	US PHARMACIA	SWEDEN	J	SOD
109	86	K	ELECTRO-NUCLEONICS	US PHARMACIA	SWEDEN	M	DIAGNOSTICS
110	86		ELECTRO-NUCLEONICS	US PHARMACIA	SWEDEN	E	
111	85	G	GENEX	US PHARMACIA	SWEDEN	J	PROTEIN A
112	86		BIOSTAR MEDICAL PROD	US SKANDIGEN AB	SWEDEN	E	
113	86	P	ALZA CORPORATION	US CIBA-GEIGY	SWISS		ESTRADERM
114	84	K	BIO-RESPONSE	US CIBA-GEIGY	SWISS	O	DRUGS
115	85	G	BIOGEN	US CIBA-GEIGY	SWISS	L	YEAST PROMOTER
116	85	V	GENENTECH	US CIBA-GEIGY	SWISS	L	VETERINARY
117	86	P	SYNERGEN	US CIBA-GEIGY	SWISS	J	ELASTASE INHIB
118	85	W	UNIGENE LABORATORIES	US CIBA-GEIGY	SWISS	RJ	PROTEASE INHIB
119	82	B	AGRIGENETICS	US HOFFMANN-LA ROCHE	SWISS	EJ	SEEDS
120	84	K	AMERICAN DIAGNOSTICS	US HOFFMANN-LA ROCHE	SWISS	A	DIAGNOSTICS
121	82	K	BIOMEDICAL RESEARCH	US HOFFMANN-LA ROCHE	SWISS	A	LAB TESTS
122	86	P	CALIFORNIA BIOTECHNO	US HOFFMANN-LA ROCHE	SWISS	RC	
123	84	P	CENTOCOR	US HOFFMANN-LA ROCHE	SWISS	M	CANCER TREATMNT
124	84	HE	DAMON BIOTECH	US HOFFMANN-LA ROCHE	SWISS	O	ENCAPCEL
125	82	EP	DAMON BIOTECH	US HOFFMANN-LA ROCHE	SWISS	J	PURIFICATION
126	86	P	DAMON BIOTECH	US HOFFMANN-LA ROCHE	SWISS		ALPHA INTERFERN
127	81	P	GENENTECH	US HOFFMANN-LA ROCHE	SWISS	J	INTERFERON
128	85	K	GENETIC DIAGNOSTICS	US HOFFMANN-LA ROCHE	SWISS	JR	MABS
129	86	P	IMMUNEX	US HOFFMANN-LA ROCHE	SWISS	J	IL-2
130	84	P	IMMUNEX	US HOFFMANN-LA ROCHE	SWISS	L	INTERLEUKIN-2
131	83	P	TECHNICLONE	US HOFFMANN-LA ROCHE	SWISS	RC	ANTIBODY
132	84	E	UNIGENE LABORATORIES	US HOFFMANN-LA ROCHE	SWISS	RC	GROWTH FACTOR
133	84	G	VEGA BIOTECHNOLOGIES	US HOFFMANN-LA ROCHE	SWISS	RC	
134	85	B	CALGENE	US NESTLE	SWISS	J	HERBICIDE TOL
135	84	P	COLLABORATIVE RESEAR	US SANDOZ	SWISS	L	PLASMINOGEN ACT
136	84	P	GENETICS INSTITUTE	US SANDOZ	SWISS	J	LYMPHOKINE FACT
137	86	B	AGRI-DIAGNOSTICS	US CIBA-GEIGY	SWITZ	J	DIAG. KITS
138	86	PQ	CHIRON	US CIBA-GEIGY	SWITZ	J	VACCINES
139	86	Q	CHIRON	US CIBA-GEIGY	SWITZ.	J	VACCINES
140	86	P	COLLABORATIVE RESEAR	US SANDOZ	SWITZ.		
141	83	B	ZOECON	US SANDOZ	SWITZ.	A	SEEDS
142	85	P	AMGEN	US AMERSHAM INTERNATIOA	UK	M	GROWTH FACTORS
143	85	K	DIAGNON	US AMERSHAM INTERNATIONAL	UK	M	DIAGNOSTIC
144	86	S	GENENTECH	US BURROUGHS WELLCOME	UK		

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YEAR	CLASS	COMPANY 1	COUNTRY	COMPANY 2	COUNTRY 2	ACTION	PRODUCT
145	86 V	SYNBIOTICS	US	NORDEN-EUROPE	UK	M	VETERINARY DX
146	82 P	GENENTECH	US	SPEYWOOD LABORATORIE	UK	J	FACTOR VIIIC
147	84 K	LIFE TECHNOLOGIES	US	UNILEVER	UK	O	DIAGNOSTICS
148	85 P	GENETICS INSTITUTE	US	WELLCOME	UK	M	TPA
149	84 Q	BIOGEN	US	WELLCOME BIOTECHNOLO	UK	JM	VACCINE
150	85 W	GENEX	US	WELLCOME RESEARCH LA	UK	R	GENE STUDY
151	84 J	GENETIC SYSTEMS	US	BAYER	W GER		MABS
152	86 Q	BIOGEN	US	BEHRINGWERKE	W GER	M	MALARIA VACCINE
153	82 P	GENENTECH	US	GRUENENTHAL GMBH	W GER	J	UROKINASE
154	85 X	CETUS	US	SCHERING AG	W GER	C	MABS-CA IMAGING
155	85 P	BIOGEN	US	BASF	WGER	J	TNF
156	85 P	INTEGRATED GENETICS	US	BASF	WGER	J	TPA
157	82 S	MOLECULAR DIAGNOSTIC	US	BAYER	WGER	E	
158	84 P	GENEX	US	BEHRINGWERKE	WGER	J	SERUM PROTEIN
159	86 P	GENEX	US	BEHRINGWERKE	WGER	R	THERAPU PROTEIN
160	84 P	IMMUNEX	US	BEHRINGWERKE	WGER	J	CSF
161	85 J	BIOSEARCH	US	BIOSYNTECH BIOCHEMIS	WGER	MJ	DNA PRODS
162	85 OP	GENENTECH	US	BOEHRINGER INGELHEIM	WGER	EJ	TNF
163	85 W	GENENTECH	US	BOEHRINGER INGELHEIM	WGER	J	RES. INSTITUTE
164	82 P	GENEX	US	SCHERING AG	WGER	J	CARDIO DRUG

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YEAR	CLASS	COMPANY	CORPORATION	ACTION	PRODUCT
1	84 M	GENENCOR	US A.E.STALEY MFG CO.	US	E FOOD ENZYMES
2	83 K	AMGEN	US ABBOTT	US	J DNA PROBES
3	84 K	CENTOCOR	US ABBOTT	US	M CANCER DIAG KIT
4	85 VQ	GENEX	US AH ROBBINS	US	J CHICKEN VACCINE
5	86 K	MONOCLONAL ANTIBODIE	US ALCON LABORATORIES	US	J
6	83 K	GENETICS INSTITUTE	US ALLIED	US	R DISEASE TEST
7	84 S	GENEX	US ALLIED	US	J PHENYLALANINE
8	83 A	BIO-TECHNOLOGY GENER	US AMERICAN CYANAMID	US	LM ANIMAL GRTH HOR
9	84 P	CYTOGEN	US AMERICAN CYANAMID	US	J MAB THERAPEUTIC
10	86 B	ECOGEN	US AMERICAN CYANAMID	US	RE INSECTICIDE
11	83 P	HYBRITECH	US AMERICAN CYANAMID	US	J MABS
12	A	MOLECULAR GENETICS	US AMERICAN CYANAMID	US	J BOVINE GH
13	86 E	SEPRACOR	US AMERICAN CYANAMID	US	J MRMBRANE TECH
14	83 Q	UNIVERSITY PATENTS	US AMERICAN CYANAMID	US	R HERPES VACCINE
15	85 S	CALIFORNIA BIOTECHNO	US AMERICAN HOME PRODUC	US	ER ANF
16	86 V	CALIFORNIA BIOTECHNO	US AMERICAN HOME PRODUC	US	J PET VACCINES
17	P	CALIFORNIA BIOTECHNO	US AMERICAN HOME PRODUC	US	M NAZDEL
18	85 B	DNA PLANT TECHNOLOGY	US AMERICAN HOME PRODUC	US	J CORN
19	86 P	HEPAR INDUSTRIES	US AMERICAN HOME PRODUC	US	L HEPARIN
20	85 P	MOLECULON	US AMERICAN HOME PRODUC	US	J TRANSDERMAL
21	84 V	RIBI IMMUNOCHEM RESE	US AMERICAN HOME PRODUC	US	M VET DRUG
22	86 K	AGEN USA	US AMERICAN HOSPITAL SU	US	M BLOOD SCREEN KT
23	85 K	BARTELS IMMUNODIAGNO	US AMERICAN HOSPITAL SU	US	A DIAGNOSTICS
24	81 O	BENTLY LABS	US AMERICAN HOSPITAL SU	US	A
25	82 K	BIO-SCIENCES ENTERPR	US AMERICAN HOSPITAL SU	US	A DIAG. TEST KITS
26	85 K	CAMBRIDGE BIOSCIENCE	US AMERICAN HOSPITAL SU	US	ML DIAGNOSTICS
27	84 K	COLLABORATIVE RESEAR	US AMERICAN HOSPITAL SU	US	J DNA PROBE TESTS
28	85 K	HYBRITECH	US AMERICAN HOSPITAL SU	US	L MAB-TESTS
29	84 K	SYNBIOTICS	US AMERICAN HOSPITAL SU	US	J DIAGNOSTICS
30	82 S	CETUS	US AMOCO	US	ER JOJOBA OIL
31	86 MK	INTEGRATED GENETICS	US AMOCO	US	J FOOD DIAGNOSTIC
32	F	INTELLIGENETICS	US AMOCO	US	A SOFTWARE
33	83 P	INTERFERON SCIENCES	US ANNHEUSER-BUSCH	US	R
34	85 P	INTERFERON SCIENCES	US ANNHEUSER-BUSCH	US	JL IF
35	86 P	INTERFERON SCIENCES	US ANNHEUSER-BUSCH	US	E IF
36	85 B	DNA PLANT TECHNOLOGY	US ARTHUR D. LITTLE	US	J PLANT CLONING S
37	84 K	VIRAGEN	US AUTOMATED MEDICAL LA	US	A
38	83 K	HYBRITECH	US BAKER INSTRUMENTS	US	J MAB BASED TESTS
39	86 P	BIO-TECHNOLOGY GENER	US BAXTER TRAVENOL	US	M GROWTH HORMONE
40	P	BIOGEN	US BAXTER TRAVENOL	US	L G-INTERFERON
41	83 K	GENENTECH	US BAXTER TRAVENOL	US	J DIAGNOSTICS
42	82 P	GENETICS INSTITUTE	US BAXTER TRAVENOL	US	E FACTOR VIII
43	P	GENETICS INSTITUTE	US BAXTER TRAVENOL	US	L FACTOR VIII
44	83 P	GENETICS INSTITUTE	US BAXTER TRAVENOL	US	J FACTOR VIII
45	P	GENETICS INSTITUTE	US BAXTER TRAVENOL	US	J HSA
46	P	HYBRITECH	US BAXTER TRAVENOL	US	J MABS
47	85 PX	HYBRITECH	US BAXTER TRAVENOL	US	J PASSIVE IMMUN.
48	86 K	VENTREX	US BAXTER TRAVENOL DIAG	US	R DX REAGENTS
49	M	INGENE	US BEATRICE FOODS	US	R SWEETENER

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YEAR	CLASS	COMPANY	CORPORATION	ACTION	PRODUCT
50	84	SF APPLIED BIOSYSTEMS	US BECTON DICKINSON	US	E INSTS & CHEMS.
51		K CYTOGEN	US BECTON DICKINSON	US	J DIAGNOSTICS
52		K IMMUNEX	US BECTON DICKINSON	US	L DIAGNOSTICS
53	85	K QUIDEL	US BECTON DICKINSON	US	ME DIAGNOSTICS
54	83	JG GENEX	US BENDIX	US	RC ENZYMES
55		INT'L PLANT RESEARCH	US BIO-RAD LABORATORIES	US	E
56		B INT'L PLANT RESEARCH	US BIO-RAD LABORATORIES	US	R
57	86	P MEDI-CONTROL CORP	US BIOTECHNOLOGY DEV CO	US	E DRUG DELIVERY
58		G T CELL SCIENCES	US BOEHRINGER MANNHEIM	US	M MONO ANTIBDS
59		P BIO-TECHNOLOGY GENER	US BRISTOL-MYERS	US	LM SOD
60	85	P COLLAGEN	US BRISTOL-MYERS	US	J COLLAGEN
61		S GENETIC SYSTEMS	US BRISTOL-MYERS	US	A MAB
62	82	P GENEX	US BRISTOL-MYERS	US	RC INTERFERONS
63	81	INTERFERON SCIENCES	US BRISTOL-MYERS	US	L IF
64	86	P MOLECULON	US BRISTOL-MYERS	US	J DRUG DELIV
65	85	ONCOGEN	US BRISTOL-MYERS	US	E
66	84	BM CALGENE	US CAMPBELL SOUP CO	US	R TOMATOES
67	81	M DNA PLANT TECHNOLOGY	US CAMPBELL SOUP CO	US	ER TOMATOES
68	86	WP ENDOTRONICS	US CELANESE	US	R IMMUNE CELLS
69		P ENDOTRONICS	US CELANESE	US	E HEPATITIS B VIR
70		P ENDOTRONICS	US CELANESE	US	R AIDS TREATMENT
71		H ENDOTRONICS	US CELANESE	US	E T-CELL THERAPY
72		P NOVA PHARMACEUTICALS	US CELANESE	US	E
73		P NOVACEL	US CELANESE	US	J
74		P TRITON BIOSCIENCES	US CETUS	US	J INTERFERON
75	84	G ATLANTIC ANTIBODIES	US CHARLES RIVER LABS	US	A AB'S
76	85	K CHIRON	US COOPER	US	J DIAGNOSTICS
77	83	K WORTHINGTON DIAGNOST	US COOPER	US	A DIAGNOSTICS
78	82	K ACUGENICS	US COOPER BIOMEDICAL	US	A DIAGNOSTICS
79	86	P DIAGNOSTIC INC	US COOPERVISION	US	M HYALURONIC ACID
80	85	P GENZYME	US COOPERVISION	US	J OPHTHALMALOGIC
81	82	S GENENTECH	US CORNING	US	J ENZYMES
82	86	O GENENTECH	US CORNING GLASS	US	J
83		F CHARLES RIVER BIOTEC	US CORNING GLASS WORKS	US	A
84	85	K HYBRITECH	US CURTIS MATHESON	US	M TANDEM/ICON
85	82	PK GENETIC SYSTEMS	US CUTTER	US	J PSEUDOMONAS DRG
86	85	P GENENTECH	US CUTTER BIOLOGICALS	US	M CLOTTING AGENT
87	84	P GENENTECH	US CUTTER LABS	US	LM FACTOR VIII
88		M SANOFI	US DAIRYLAND FOOD LABOR	US	A CHEESE
89	85	B CALGENE	US DEKALB-PFIZER	US	J HYB CORN SEED
90	83	P IMMUNEX	US DIAMOND SHAMROCK	US	L LYMPHOKINES
91	81	HW COLLABORATIVE GENETI	US DOW CHEMICAL	US	J RDNA TECHNOL
92		P COLLABORATIVE RESEAR	US DOW CHEMICAL	US	E INTERFERON
93	82	J COLLABORATIVE RESEAR	US DOW CHEMICAL	US	R ENZYME RENIN
94	86	M COLLABORATIVE RESEAR	US DOW CHEMICAL	US	P RENIN
95		I ADVANCED GENETIC SCI	US DUPONT	US	R
96		PK APPLIED BIOTECHNOLOG	US DUPONT	US	J CANCER DX, THERA
97	84	K BIOTECH RESEARCH LAB	US DUPONT	US	E AIDS TEST
98		K BIOTECH RESEARCH LAB	US DUPONT	US	L DIAGNOSTICS

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YEAR	CLASS	COMPANY	CORPORATION	ACTION	PRODUCT
99	85	G	BIOTECHNICA INTERNAT	US DUPONT	US M IN VITRO TRANS
100		K	CENTOCOR	US DUPONT	US J DIAGNOSTICS
101	86	P	CISTRON TECHNOLOGY	US DUPONT	US L IL-2
102		B	DNA PLANT TECHNOLOGY	US DUPONT	US J PLANT VARIETIES
103	85	K	HYBRITECH	US DUPONT	US L MAB-TESTS
104		K	MOLECULAR BIOSYSTEMS	US DUPONT	US E DNA PROBE
105		K	MOLECULAR BIOSYSTEMS	US DUPONT	US L AIDS TEST
106		K	MOLECULAR BIOSYSTEMS	US DUPONT	US R DNA DIAGNOSTICS
107	81	G	NEW ENGLAND NUCLEAR	US DUPONT	US A REAGENTS
108	86	F	VEGA BIOTECHNOLOGIES	US DUPONT	US AJ DNA SYNTHESIZERS
109		F	VEGA BIOTECHNOLOGIES	US DUPONT	US EM SYNTHESIZERS
110		OJ	ADVANCED GENETIC SCI	US EASTMAN KODAK	US J SNOWMAX
111		JO	AMGEN	US EASTMAN KODAK	US JM CHEMICALS
112		K	CETUS	US EASTMAN KODAK	US J AIDS DIAG
113		K	CETUS	US EASTMAN KODAK	US J DIAGNOSTICS
114		KP	CYTOGEN	US EASTMAN KODAK	US R
115		KP	CYTOGEN	US EASTMAN KODAK	US E
116		M	ENGENICS	US EASTMAN KODAK	US J BIOCHEMICALS
117	85	P	IMMUNEX	US EASTMAN KODAK	US J LYMPHOKINES
118	86	P	IMMUNEX	US EASTMAN KODAK	US J LYMPHOKINE PROD
119	85	QV	MOLECULAR GENETICS	US EASTMAN KODAK	US J VET. VACCINE
120	86	V	MOLECULAR GENETICS	US EASTMAN KODAK	US J
121		KP	NEORX	US EASTMAN KODAK	US EJ
122		M	NUTRISearch CO	US EASTMAN KODAK	US J FOOD INGREDIENT
123	84	B	VIRATEK	US EASTMAN KODAK	US E AGRICULTURE
124		P	BIO-RESPONSE	US ELI LILLY	US RC
125	85	P	CALIFORNIA BIOTECHNO	US ELI LILLY	US L DRUG DELIVERY
126		P	COLLAGEN	US ELI LILLY	US J CARDIOVASCULAR
127		K	DAMON BIOTECH	US ELI LILLY	US RC DIAGNOSTICS
128	81	P	GENENTECH	US ELI LILLY	US LM INSULIN
129	85	KP	HYBRITECH	US ELI LILLY	US A MABS
130	82	MB	INT'L PLANT RESEARCH	US ELI LILLY	US R CEREAL PLANTS
131	83	BS	INT'L PLANT RESEARCH	US ELI LILLY	US J
132	84	S	SYNERGEN	US ELI LILLY	US E
133	86	K	GEN-PROBE	US FISHER SCIENTIFIC	US M MYCOPLASMA KIT
134	83	X	CENTOCOR	US FMC	US J IMMUNOREGULATOR
135		XK	CENTOCOR	US FMC	US J DIAGNOSTICS
136	86	P	CENTOCOR	US FMC	US E
137	83	B	REPLIGEN	US FMC	US J PESTICIDES
138		KP	SUMMA MEDICAL	US GENERAL ELECTRIC	US J MABS
139	85	M	DNA PLANT TECHNOLOGY	US GENERAL FOODS	US J COFFEE
140	83	M	INT'L PLANT RESEARCH	US GENERAL FOODS	US R FOOD PROCESSING
141	85	P	REPLIGEN	US GILLETTE	US J HAIR PRODUCT
142	84		BIOTECHNICA INTERNAT	US GULF APPLIED TECHNOL	US E
143	85	M	DNA PLANT TECHNOLOGY	US HERSHEY	US J COCOA BEANS
144	83	F	GENENTECH	US HEWLETT-PACKARD	US J INSTRUMENTS
145	84	M	BIOTECHNICA INTERNAT	US HJ HEINZ	US R FOOD PROCESSING
146		J	BIOTECHNICA INTERNAT	US HJ HEINZ	US J PHENYLALANINE
147	82	QV	GENENTECH	US INT'L MINERAL AND CH	US JL ANIMAL VACCINE

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148	83	A	BIOGEN	US	JL	AMIMAL GRTH HOR
149	86	V	SYNBIOTICS	US	J	DIAGNOSTICS
150		S	GENETICS INSTITUTE	US	J	
151	85	PQ	AMGEN	US	JM	VACCINE, PEPTID
152	86	P	AMGEN	US	J	IL-2 ANALOG
153	85	K	CHIRON	US	EJ	DIAGNOSTICS
154		K	CYTOGEN	US	JR	MAB AND NMR DX
155	82	GS	ENZO	US	E	
156	83	K	IMMULOK	US	A	DIAGNOSTICS
157	84	K	IMMUNOMEDICS	US	R	TEST KIT
158	86	KP	IMMUNOMEDICS	US	R	
159	82	K	MONOCLONAL ANTIBODIE	US	RC	PREGNANCY TEST
160	83	G	XENOGEN	US	J	
161	82	B	AGRIGENETICS	US	E	SEEDS
162	84	B	DNA PLANT TECHNOLOGY	US	J	PLANT DIAGNOS
163	85	M	DNA PLANT TECHNOLOGY	US	J	SNACK FOODS
164	83	P	CYTOGEN	US	E	CANCER DRUGS
165		P	HYBRITECH	US	J	MAB THERAP.
166	81	S	MOLECULAR GENETICS	US	E	
167	82	K	MOLECULAR GENETICS	US	L	HERPES TEST
168	84		AGRIGENETICS	US	A	
169	85	PM	GENENTECH	US	J	VITAMIN C
170	83	B	CHIRON	US	J	PLANT STRAINS
171	82	S	MOLECULAR GENETICS	US	E	
172		B	NPI	US	E	PLANTS
173	85	B	NPI	US	E	PLANT MB
174		Q	PRAXIS BIOLOGICS	US	M	VACCINES
175	81	Q	BIOGEN	US	J	VACCINE
176	82	K	CHIRON	US	J	HEPATITIS TEST
177	85	P	GENENTECH	US	J	FACTOR VIII
178		K	GENETIC SYSTEMS	US	J	MABS FOR INFECT
179	83	K	SYNBIOTICS	US	JR	DIAGNOSTICS
180	86	F	CAMBRIDGE RESEARCH B	US	E	
181		F	GENETIC DESIGN	US	A	DNA SYNTHESIZER
182	81	S	BIOGEN	US	E	
183	83	P	BIOGEN	US	J	TPA
184		S	BIOTECHNICA INTERNAT	US	JL	EXPRESSION SYS
185	81	S	COLLAGEN	US	E	COLLAGEN PRODS.
186	84	P	COLLAGEN	US	J	GROWTH FACTORS
187	86	M	DNA PLANT TECHNOLOGY	US	J	SWEETENERS
188	81		GENENTECH	US	E	
189	82	A	GENENTECH	US	J	BOVINE GRTH HOR
190	85	P	GENENTECH	US	RC	GROWTH HORMONES
191	81		GENEX	US	E	
192	84	H	INVITRON	US	L	CULTURE PRODS
193		H	QUEUE SYSTEMS	US	J	CELL CULT
194		M	CETUS	US	J	FOOD PRODUCTS
195	85	O	CETUS	US	J	CORN STARCH
196	86	F	GENENTECH	US	L	

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YEAR	CLASS	COMPANY	CORPORATION	ACTION	PRODUCT
197	86	M	DNA PLANT TECHNOLOGY	US	R SWEETENERS
198		B	AGRI-DIAGNOSTICS ASS	US	M PLANT DIAGNOSTI
199	85	P	CALIFORNIA BIOTECHNO	US	JM LHRH NASAL SPRY
200	86	P	CALIFORNIA BIOTECHNO	US	R NAZDEL
201	85	K	CAMBRIDGE BIOSCIENCE	US	JE DIAGNOSTIC
202	84	K	ENZO	US	JM DIAGNOSTICS
203	83	JG	IGI BIOTECHNOLOGY	US	J
204	86	F	CETUS	US	J INSTRUMT SYSTMS
205		WP	ONCOGENE SCIENCE	US	EJ ONCOGENES, GF'S
206	83	L	PETROFERM	US	M OIL EMULSIFIER
207		A	REPLIGEN	US	J ANIMAL GRTH HOR
208	86	PK	T CELL SCIENCES	US	R ARTHRITIS DRUG
209	85	VQ	CAMBRIDGE BIOSCIENCE	US	L VET VACCINE
210	86	P	SYNERGEN	US	J COLLAGENASE INH
211		K	ELECTRO-NUCLEONICS	US	R AIDS TEST
212		VA	SYNBIOTICS	US	R VACCINES, ETC.
213	85	V	MONOCLONAL ANTIBODIE	US	J VET DIAGNOSTICS
214	84	K	DIAGNOSTIC INC.	US	EL HYALURINIC AC
215	86	P	MELOY LABORATORIES	US	A
216	85	P	CETUS	US	J ANTIBIOTICS
217	81	P	BIOGEN	US	JE INTERFERON
218		P	COLLAGEN	US	M INPLANTS
219	86	P	GENEX	US	R PLASMA PROTEIN
220	84	JG	GENEX	US	J PHENYLALANINE
221	86	P	INVITRON	US	J
222	83	P	CETUS	US	J BETA INTERFERON
223	86	P	AMGEN	US	EJ SOMATOTROPIN
224	84	P	BIOGEN	US	J ANTI CLOT AGENT
225	86	V	CAMBRIDGE BIOSCIENCE	US	M FELINE LEUK KIT
226	81	VQ	CETUS	US	M LIVSTOK VACCINE
227	86	Q	CODON	US	M SWINE VACCINES
228	84	P	IMMUNEX	US	R MAF
229	85	V	NEOGEN	US	J VETERINARY
230	82	M	CETUS	US	R FRUCTOSE
231	81	K	COLLABORATIVE RESEAR	US	LM DIAGNOSTIC TEST
232	82	K	COLLABORATIVE RESEAR	US	L ASSAY SYSTEM
233	84	K	AMERICAN BIONUCLEAR	US	E
234	81	K	GENETIC SYSTEMS	US	J DIAGNOSTIC
235	83	K	GENETIC SYSTEMS	US	J DIAGNOSTICS
236	85	K	GENETIC SYSTEMS	US	EJ IMMUNOASSAYS
237	84	P	IMMUNEX	US	J IL-1
238	82	P	KEY PHARMACEUTICAL	US	E DRUG DELIV.
239	85	S	T CELL SCIENCES	US	E
240	82	KP	GENETIC SYSTEMS	US	J MONOCLONALS
241	85	VQ	CETUS	US	J VET VACCINE
242	84	JO	AMGEN	US	R CHEMICALS
243	86	B	BIOTECHNICA INTERNAT	US	R RHIZOBIA BACT.
244	85	B	GENETICS INSTITUTE	US	R PESTICIDES
245		B	DNA PLANT TECHNOLOGY	US	J PLANTS

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YEAR	CLASS	COMPANY	CORPORATION	ACTION	PRODUCT
246 83 V		AMGEN	US UPJOHN	US J	BOVINE GH
247 84 J		BIOTECHNICA INTERNAT	US UPJOHN	US J	PROTEINS
248 V		MOLECULAR GENETICS	US UPJOHN	US M	GENECOL 99
249 85 V		MOLECULON	US UPJOHN	US J	VET DRUG DELIV
250 83 S		IMMUNOMODULATORS	US VENTREX	US E	
251 F		AMICON	US W R GRACE	US A	FILTRATION
252 84 B		CETUS	US W R GRACE	US J	AG PRODS
253 J		SYNERGEN	US W R GRACE	US J	FLAVORS/FRAGRS
254 83 K		CENTOCOR	US WARNER-LAMBERT	US J	DIAGNOSTIC
255 85 K		CENTOCOR	US WARNER-LAMBERT	US L	HEP B DIAGS
256 81 P		COLLABORATIVE RESEAR	US WARNER-LAMBERT	US J	UROKINASE
257 84 K		SCIENTIFIC LABORATOR	US WARNER-LAMBERT	US L	DIAGNOSTIC
258 85 K		TECHNOGENETICS	US WARNER-LAMBERT	US J	DIAGNOSTICS
259 81 P		VIRATEK	US WARNER-LAMBERT	US L	ANTICANCER
260 86 P		CALIFORNIA BIOTECHNO	US WYETH	US M	RENIN INHBITORS